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HOOKER'S

ICONES PLANTARUM;

OR,

FIGURES, WITH DESCRIPTIVE CHARACTERS AND REMARKS,
OF NEW AND RARE PLANTS,

SELECTED FROM THE

KEW HERBARIUM.

THIRD SERIES.

EDITED BY

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MISSOURI
BOTANICAL
GARDEN.

Plate 1501.

DELPHINIUM MACROCENTRON, *Oliv.*

Ranunculaceæ.

D. macrocentron, *Oliver in Journ. Linn. Soc.* xxi. 397; herba erecta pubescens 2–3-pedalis v. ultra, foliis caulinis palmatim 5-partitis, segmentis 3–5-fidis lobo centrali elongato lineari-lanceolato acuminato, foliis superioribus segmentis elongato-linearibus indivisis, racemis terminalibus longe pedunculatis pilosulis, pedicellis erectis apice recurvis bractea lineari 2–4-plo longioribus, apicem versus bibracteolatis, floribus cæruleo-purpureis, calcare erecto subcylindraceo obtuso pilosulo lamina late ovata 2–4-plo longiore, petalis anterioribus longe unguiculatis lamina oblongo-spathulata bifida pauce setulosa, carpellis 3 pilosis, stylis longiusculis superne glabratis recurvis.

Hab. Masai country, Lykipia, Tropical Africa, *J. Thomson.*

Folia inferiora longe petiolata, parce pilosula. *Flores* $1\frac{1}{2}$–2 poll.; calcar $\frac{3}{4}$–1 poll.

Remarkable in the long erect nearly straight spur. Radical leaves are wanting in our specimens.—D. Oliver.

Fig. 1. Posterior petal. 2. Anterior petal. 3. Stamen. 4. Carpels. *All enlarged.*

M.S. del et lith

Delphinium macrocentron, Oliv.

Plate 1502.

RANUNCULUS COOPERI, *Oliv.*

Ranunculaceæ.

R. Cooperi, *Oliv.* (*sp. nov.*) ; herba 3–4-pedalis glabra, caule erecto multifloro, foliis radicalibus longe petiolatis medio peltatis orbiculatis crenatis subcoriaceis, bracteis pedunculos amplectentibus ovato-oblongis lanceolatisve coriaceis utrinque 1–3-dentatis, pedunculis longiusculis erectis, sepalis caducissimis obovato-ellipticis dorso parce pilosulis longitudinaliter nervosis, petalis circ. 15–17 oblanceolatis obtusis flavis conspicue nervosis, carpellis (immaturis) globoso-capitatis sublævibus apice angustatis.

Hab. Basutoland, *T. Cooper* (leafy specimens of perhaps the same plant, but with the more prominent venation of *R. Baurii*, we have from Transvaal, *Mr. Nelson*, and from the Vaal river, 5,000 feet, *Dr. Sutherland*).

Folia radicalia 3–5 poll. diam., petiolis 12–18 poll. longis. *Inflorescentia* 10–15-flora laxe et irregulariter cymoso-paniculata. *Flores* $1\frac{1}{4}$–$1\frac{1}{2}$ poll. diam.

Having recently received Kaffrarian specimens of *Ranunculus Baurii*, MacOw., collected by the Rev. R. Baur, the difference between these and the Basutoland specimens gathered by Mr. Cooper (referred to in a note in *Journ. Linn. Soc.* xviii. 390) is so striking that, at least at first, I could hardly regard them as referable to the same species.

It is true that the differences are chiefly in dimensions and number of flowers, and I admit that it is not improbable connecting forms may be found ; nevertheless a peltate-leaved *Ranunculus* from South Africa is of sufficient interest to merit a figure, and with a plate of *R. Baurii*, our specimens of which bear ripe fruit, we give also this of Mr. Cooper's plant, which may provisionally bear his name.—D. Oliver.

Fig. 1. Sepal. 2. Petal, showing gland. 3. One of the shorter inner stamens, or from a bud. 4. Carpel, scarcely mature. *All enlarged.*

M.S. del, et lith

Ranunculus Cooperi, Oliv

PLATE 1503.

RANUNCULUS BAURII, *MacOw.*

RANUNCULACEÆ.

R. Baurii, *MacOwan in Journ. Linn. Soc.* xviii. 390; herba 9–20 poll. glabra, caule erecto nudo 1–3-floro, foliis radicalibus longe petiolatis peltatis crenatis subtus pallidioribus venosis, calyce glabro, petalis luteis oblongo-lanceolatis, carpellis acuminatis rostratis oblique nervosis nervis prominentibus anastomosantibus.

HAB. Kaffraria, Baziya mountain, 4,000 feet, *Rev. R. Baur.*

Folia 1–1½ poll. diam.; petiolis 2½–6 poll. longis. *Flores* ¾–1 poll. diam.—D. OLIVER.

Fig. 1. Sepal. 2. Petal, inner face. 3. Stamen. 4. Carpels. *All enlarged.*

M.S.del.et lith

Ranunculus Baurii, Mac Ow.

PLATE 1504.

ALCHEMILLA JOHNSTONI, *Oliv.*

ROSACEÆ, Tribe POTERIEÆ.

A. Johnstoni, *Oliv.* (*sp. nov.*); fruticulus depressus ramulis diffusis pilosulis vaginatis, foliis breviter petiolatis coriaceis rotundato-reniformibus plicatis 6 (5–7)-lobatis, lobis obtusis bidentatis vel subæqualiter 11–15-lobatis, supra tenuiter pilosis glabratisve subtus dealbato-glaucis pilis longiusculis sericeis sparsis obsitis, stipulis apice liberis coriaceis late ellipticis obtusis sæpius bidentatis, cymis paucifloris (circ. 5-floris) pilosulis pedunculos breves vaginatos axillares folio sæpe longiores terminantibus, calycis tubo turbinato-infundibulari, carpellis solitariis.

HAB. Kilimanjaro, 13,000 feet, *H. H. Johnston.*

Folia $\frac{1}{4}$–$\frac{1}{3}$ poll. lata; petiolus liber 1–2 lin. longus. Perianthium lobis interioribus deltoideis, exterioribus brevioribus lanceolatis.

With wiry branches 3–6 inches in length, the thickness of a crow-quill, spreading from a woody crown.—D. OLIVER.

Fig. 1. Leaf and stipule. 2. Axillary inflorescence. 3. Flower. 4. Side view of same. 5. Stamens. 6. Longitudinal section of perianth-tube. *All enlarged.*

M.S.del, et lith.

Alchemilla Johnstoni, Oliv.

Plate 1505.

ALCHEMILLA ARGYROPHYLLA, *Oliv.*

Rosaceæ, Tribe Potentilleæ.

A. argyrophylla, *Oliv.* (*sp. nov.*); frutex stipulis vaginantibus exceptis sericeo-pilosis, ramis primariis elongatis ramulos breves axillares numerosos emittentibus, foliis breviter petiolatis tripartitis lobo centrali late oblanceolato breviter trifido lobis lateralibus oblongis acutis, supra sericeis subtus pilis longis argenteis obsitis, stipulis membranaceis glabris castaneis margine pilis longis sparsis ciliatis, cymis 5–7-floris axillaribus pedunculo vaginato abscondito, floribus pedicellatis sericeis flavidis, carpellis 4.

Hab. Kilimanjaro, 8,000–10,000 ft., *H. H. Johnston.*

Folia $\frac{1}{2}$ poll. longa; lamina tripartita petiolo 3–4-plo longior. *Stipulæ* $\frac{1}{3}$–$\frac{1}{2}$ poll. longæ apice liberæ ovatæ obtusæ v. acutiusculæ. *Pedicelli* flores subæquantes. *Perianthium* tubo turbinato, lobis exterioribus lineari-lanceolatis, interioribus ovato-deltoideis dimidio brevioribus.

With something of the habit of the Andine *Alchemilla polylepis*, Wedd., but the small congested cymes emerge from the sheaths of nearly every axil on the lateral leafy shoots. The contrast between the silvery foliage and smooth chestnut-brown membranous, usually transversely rugose-plicate, stipules, renders this one of the most striking species of the genus.—D. Oliver.

Fig. 1. Leaf and stipule. 2. Axillary cyme. 3. Pedicellate flower. 4. Stamens. 5. Longitudinal section of flower. 6. Stipitate carpel. *All enlarged.*

M.S. del et lith.

Alchemilla argyrophylla, Oliv.

Plate 1506.

ASTEPHANIA AFRICANA, *Oliv.*

Compositæ, Tribe Buphthalmeæ.

Astephania, *Oliv.* (*gen. nov.*); capitula heterogama homochroma radiata, floribus radii ♀ 1-seriatis discique ♂ fertilibus. Involucrum subhemisphæricum basi leviter intrusum, bracteis 2–3-seriatis herbaceis basi coriaceis subæqualibus. Receptaculum convexum paleis angustissimis flores subæquantibus onustum. Corollæ ♀ ligulatæ, lamina ovali-oblonga apice minutissime 3-denticulata v. integra; ♂ regulares tubo angusto sursum ampliato limbo breviter 5-dentato. Antheræ basi sagittatæ auriculis per paria connatis, apice connectivo breviter ovato acuto apiculatæ. Styli fl. ♂ rami lineari-oblongi obtusi apice vix aut leviter subdilatati. Achænia leviter angulata apice truncata calva, basi subturbinato-angustata, glabra, valide 10-costata costis alternis interdum angustioribus.—*Herba* verosimiliter 2–3-pedalis pilis simplicibus multicellularibus laxe hirtella; caule erecto tereti superne ramoso. *Folia* caulina alterna petiolata late ovata basi cordata obtusa late crenato-lobulata laxe pilosula, 1–1½ poll. longa et lata. *Capitula* sæpe longe pedunculata terminalia solitaria v. in cymis pleiocephalis laxis disposita, ¾ poll. lata, floribus flavis, ligulis radii involucro duplo longioribus. *Achænia* ½–⅔ lin. longa.

A. africana, *Oliv.* (*sp. unica*).

Hab. Kilimanjaro, 5,000 ft., *H. H. Johnston.*

With the habit and general aspect of *Anisopappus africanus* or of some specimens of *Epallage dentata*, but wholly destitute of pappus. On this ground, perhaps, my *Sphacophyllum Kirkii* (Ic. Plant. 1451) should be referred to *Astephania*, though in view of its different, apparently arborescent habit, I prefer to leave it for the present as already named.—D. Oliver.

Fig. 1. Involucral bract. 2. Ray-floret. 3. Paleæ of receptacle. 4. Disk-floret. 5. Anthers. 6. Style-branches. 7. Achene. *All enlarged.*

M.S. del et lith

Astephania africana, Oliv.

Plate 1507.

GYNURA VALERIANA, *Oliv.*

Compositæ, Tribe Senecionideæ.

G. Valeriana, *Oliv.* (*sp. nov.*); perennis erecta 1½–2-pedalis, caule 5-sulcato glabro basi folioso, foliis pinnatipartitis petiolatis membranaceis supra glabratis subtus parce pilosulis glabratisve, segmentis lateralibus utrinque 5–6 lanceolatis acutis grosse serrato-incisis dentibus acutis, segmentis inferioribus minoribus ovatis v. ovato-lanceolatis, petiolo basi biauriculato auriculis stipuliformibus semicordatis incisis, foliis superioribus minoribus remotiusculis, capitulis circ. 40-floris discoideis pedicellatis calyculatis in corymbo terminali polycephalo dispositis, pedicellis involucro subæquilongis puberulis, bracteis involucri cylindracei 11–15 lineari-oblongis acutatis glabris dorso longitudinaliter 2–3-nervosis, calyculi foliolis brevibus lineari-subulatis, corollis omnibus tubulosis flavis tubo elongato angusto involucrum subæquante, basi leviter dilatato apice gradatim infundibuliformi, styli ramis in appendicibus elongatis angustis papillosis abeuntibus, acheniis circ. 10-costatis glabris.

Hab. Kilimanjaro, 5,000 ft., *H. H. Johnston.*

Folia inferiora 5–7 poll. longa, segmentis majoribus 1–1½ poll. longis, ½–⅔ poll. latis. *Inflorescentia* corymbosa 3–4 poll. lata. *Capitula* ½ poll. longa.

I thought at first this should be referred to *Senecio*, under which genus it appears in Mr. Johnston's account of his expedition, copied from my list; but the elongate style-branches must, I suppose, outweigh the general facies, which is quite that of a discoid *Senecio*.—D. Oliver.

Fig. 1. Involucre. 2. Bract of same. 3. Floret. 4. Seta of pappus. 5. Anthers. 6. Style-branches. *Enlarged.*

M.S. del et lith

Plate 1508.

EURYOPS DACRYDIOIDES, *Oliv.*

Compositæ, Tribe Senecionideæ.

E. dacrydioides, *Oliv.* (*sp. nov.*); frutex ramosus ramulis strictiusculis erectis dense foliosis, foliis crassiusculis rigidis lineari-subulatis acutiusculis semiteretibus subarcte imbricatis marginibus infra plus minus lanato-villosis, capitulis apices versus ramulorum dispositis breviter pedunculatis, involucri foliolis circ. 13–17 oblongo-lanceolatis obtusis v. acutiusculis glabris, ligulis 16–18 ovali-oblongis involucro 2–3-plo longioribus flavis, receptaculo foveolato, foveolis dentato-marginatis, pappo caducissimo setoso, setis barbellatis, acheniis 5-costatis glabris.

Hab. Kilimanjaro, 10,000–14,000 ft., *H. H. Johnston.*

Folia $\frac{1}{6}$–$\frac{1}{4}$ poll. longa. *Capitula* $\frac{3}{4}$ poll. diam.; involucrum $\frac{1}{4}$–$\frac{1}{3}$ poll. diam.

In habit approaching *Euryops Candollei*, Harv., of the Cape Flora.—D. Oliver.

Fig. 1. Leaf with ciliate-lanate margin below. 2. Involucre and receptacle. 3. Ray-floret. 4. Disk-floret. 5. Setæ of pappus. 6. Stamens. 7. Style-branches. *All enlarged.*

M.S del et lith

Euryops dacryoides DC.

Plate 1509.

VERONICA MYRSINOIDES, *Oliv.*

Scrophulariaceæ, Tribe Veroniceæ.

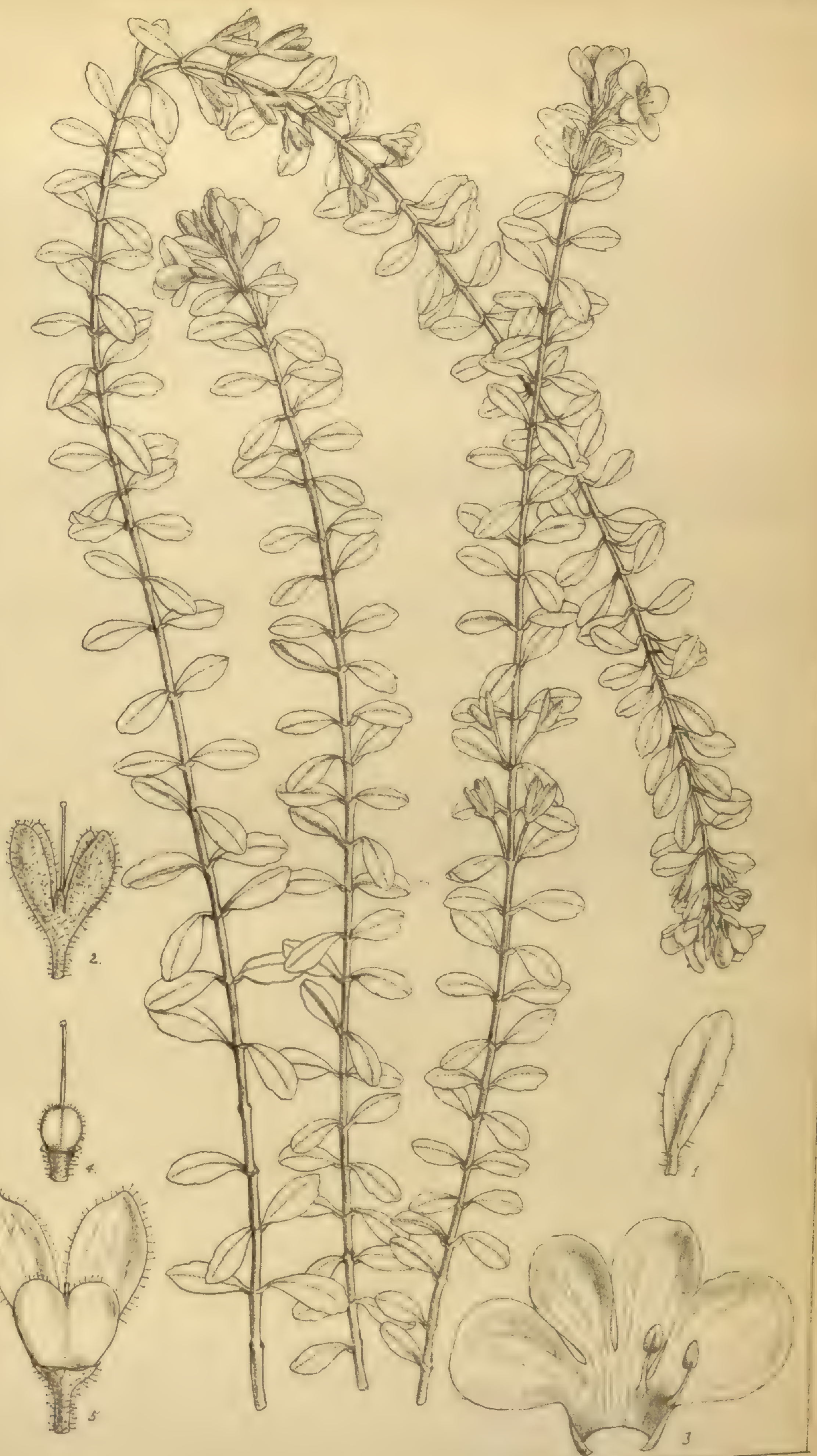
V. myrsinoides, *Oliv.* (*sp. nov.*); perennis, caulibus repentibus elongatis parce aut vix ramosis foliatis bifariam pilosulis, foliis breviter petiolatis oppositis oblanceolatis obovato-oblanceolatisve obtusis utrinque 2–3-crenato-dentatis glabris plus minus coriaceis, floribus in axillis foliorum superiorum breviter pedicellatis, pedicellis glanduloso-pubescentibus calyce subæquilongis v. brevioribus, calyce 5-partito lobo postico minuto cæteris oblanceolato-oblongis glanduloso-ciliatis, corolla pallide cærulea profunde 4-fida lobis subæquilongis postico cæteris obovatis integris latiore late obovato, capsula obcordata lobis obtusis.

Hab. Kilimanjaro, 11,000 ft., *H. H. Johnston.*

Folia $\frac{1}{4}$—$\frac{1}{3}$ poll. longa; petiolus 1 lin. vel brevior. *Flores* 3–4 lin. lati. *Ovarium* ellipsoideo-globosum, apice parce glandulosum, glandulis stipitatis; stylus gracilis ovario duplo longior.

Veronica glandulosa, Hochst., is the nearest Tropical-African ally of this species known to me.—D. Oliver.

Fig. 1. Leaf. 2. Calyx, showing minute posticous segment. 3. Corolla, laid open. 4. Pistil. 5. Fruit with two calyx-lobes behind. *All enlarged.*



M. S. del, et lith

Veronica myrsinoides, Oliv

Plate 1510.

PITHECOLOBIUM GEMINATUM, *Benth.*

Leguminosæ, Tribe Ingeæ.

P. geminatum, *Benth. in Hook. Lond. Journ. Bot.* (1844) iii. 202; ramulis gracillimis petiolisque puberulo-tomentellis, stipulis sæpius spinescentibus spinis rectis acutis apice glabris, petiolo glandulifero, pinnis unijugis, foliolis 2–4-jugis oblique obovato-oblongis obtusis v. obtusiusculis sæpe mucronulatis glabris venosis sessilibus addito exteriore minore ad basin rhacheos, pedunculis axillaribus, capitulis globosis glabratis, corolla 5-fida tubo ampliato calyce 2–3-plo longiore, legumine compresso curvato marginibus inter semina constrictis valvis tenuiter coriaceis glabratis, seminibus compressis late ellipsoideis orbiculatisve nigris.

Calliandra ? geminata, *Benth. in Linn. Trans.* xxx. 548; *Inga flexuosa*, Grah. Wall. Cat. 5286 (fide *Benth.* l.c.)

Hab. Ceylon, *Gardner, Mackenzie, Thwaites*, No. 1531.

Folia 1–2-poll.; foliolis superioribus $\frac{1}{2}$–$\frac{3}{4}$ poll. longis $3\frac{1}{2}$–$5\frac{1}{2}$ lin. latis. *Spinæ* ad 5 lin. longæ sæpe breviores v. interdum obsoletæ. *Pedunculi* graciles axillares v. quasi terminales, 1–$1\frac{1}{2}$ poll. longi. *Stamina* $\frac{3}{4}$–1 poll. longa. *Legumen* $2\frac{1}{2}$–3 poll. longum, 5–6 lin. latum breviter stipitatum.

We are indebted to Mr. J. Medley Wood, of the Botanic Garden, Natal, for fruiting specimens which conclusively settle that *Pithecolobium* is the genus to which this plant belongs. It was referred to *Inga* by Wight and Arnott, and with doubt to *Calliandra* by Mr. Bentham in his last memoir on the Mimoseæ, cited above.—D. Oliver.

Fig. 1. Bract. 2. Flower. 3. Anthers. 4. Ovary. 5. Seed and funicle. *All enlarged.*

M.S. del, et lith.

Pithecolobium geminatum Benth.

Plate 1511.

RUELLIA DISCIFOLIA, *Oliv.*

Acanthaceæ, Tribe Ruellieæ.

R. discifolia, *Oliv.* (*sp. nov.*); ramulis gracilibus pubescentibus ultimis minute glandulosis pilis longis patentibus simplicibus parce vestitis, foliis late rotundatis obtusis integris basi subtruncatis utrinque stellato-pubescentibus longe petiolatis, floribus subtripollicaribus ramulos axillares apice bifoliatos terminantibus, calycis 5-partiti segmentis linearibus subæqualibus corollæ tubo leviter curvato superne dilatato 4–5-plo brevioribus, lobis corollæ ovato-rotundatis subæqualibus obtusis integris, antheris linearibus vix exsertis.

Hab. Adda Galla, Somali-land, *Messrs. James and Thrupp.*

Folia $\frac{3}{4}$–1 poll. longa et lata; petiolus lamina subæquilongus. *Calyx* $\frac{2}{3}$ poll. longus. *Corolla* $2\frac{1}{2}$ poll. longa; tubus superne leviter pubescens.

A little resembling *R. amabilis*, S. Moore, the leaves of which are obtusely toothed, shortly acuminate, and with simple, not stellate, indumentum.—D. Oliver.

Fig. 1. Calyx. 2. Stellate hairs of leaf and petiole. 3. Anthers. *All enlarged.*

M.S.del, et lith.

Ruellia discifolia, Oliv.

Plate 1512.

TETRACTOMIA ROXBURGHII, *Hook. f.*

Rutaceæ, Tribe Zanthoxyleæ.

T. Roxburghii, *Hook. f. Flor. Brit. Ind.* i. 491.

Hab. Penang, *Roxburgh*; Government Hill, alt. 2,500 ft., *C. Curtis*; Singapore, *Maingay*.

Arbor magna; ramuli crassitie pennæ olorinæ, læves. *Folia* 1–3-foliolata, glabra, foliolis 3–5-pollicaribus cuneato-obovatis ellipticisve obtuse acuminatis integerrimis, basi acutis; petiolo $\frac{1}{3}$–$\frac{1}{2}$-pollicari. *Cymæ* terminales et axillares, paniculatæ, puberulæ, pedunculatæ, 4–5 poll. latæ; flores breviter pedicellati, $\frac{1}{8}$ poll. diam. *Sepala* 4, late ovata, subacuta. *Petala* 4, sepalis subduplo majora, late ovata, acuta, disco staminodio parvulo instructo. *Stamina* petalis æquilonga. *Discus* expansus, ovario multo latior, obtuse angulatus. *Stylus* gracilis, stigmate minute lobulato. *Carpella* matura 1–3, oblongo-fusiformia, $\frac{1}{4}$–$\frac{1}{3}$ poll. longa, obtusa. *Seminum* ala oblonga, nucleo duplo longior.

The minute staminodes on the disk of the petals were overlooked in the specimens described in the 'Flora of British India;' they do not occur in *T. majus*, which further differs in the longer filaments which exceed the petals. Kurz has published the other Indian species, *T. majus*, as *Tetramerista paniculata*, in the 'London Journal of Botany,' 1875, p. 333, from which genus, as from the Order to which it belongs (*Ochnaceæ*), it totally differs in habit, opposite compound leaves, and fruit.—J. D. Hooker.

Fig. 1. Flower-bud. 2. Flower. 3. Petal. 4. Disk and ovary. 5. Fruit. 6. Seed. 7. Seed laid open, showing the embryo. 8. Embryo. *All enlarged*

M. S. del, et lith.

Tetractomia Roxburghii Hk f.

Plate 1513.

MELANORRHŒA CURTISII, *Oliv.*

ANACARDIACEÆ.

M. Curtisii, *Oliv.* (*sp. nov.*); foliis oblongo-oblanceolatis v. ovali-oblongis obtusis v. breviter obtuse apiculatis subcoriaceis glabris petiolatis, paniculis folia æquantibus v. superantibus laxis, staminibus 10, fructu subgloboso stipitato.

HAB. Government Hill, Penang, 700 ft., *C. Curtis.*

Ramuli teretes læves glabri. *Folia* 3–5 poll. longa, $1\frac{1}{3}$–$2\frac{1}{4}$ poll. lata, nervis utrinque 12–16 subtus subprominulis; petiolus $\frac{1}{2}$–$\frac{3}{4}$ poll. longus. *Paniculæ* in axillis foliorum superiorum v. quasi terminales laxæ ramis divaricatis; bracteæ parvæ ovato-lanceolatæ; pedicelli puberuli. *Calyx* caducus longitudinaliter nigro-nervosus. *Petala* linearia puberula 2–$2\frac{1}{2}$ lin. longa, æstivatione sinistrorsum contorta; petala fructifera rigidiuscula oblanceolato-linearia $1\frac{3}{4}$–$2\frac{1}{2}$ poll. longa. *Stamina* 10 glabra, filamentis gracilibus in disco pilosulo insertis; antheræ dorsifixæ. *Ovarium* stipitatum glabrum. *Drupa* depresso-globosa stipitata 5–8 lin. diam. lævis; stipes $\frac{1}{3}$-poll.—D. OLIVER.

Fig. 1. Bud, calyx separating. 2. Expanded flower. 3. Stipitate ovary and disk. 4. Section of ovary. *All enlarged.*

M.S. del, et lith.

Melanorrhœa Curtisii Oliv.

Plate 1514.

ASIMINA INSULARIS, *Hemsl.*

Anonaceæ.

A. insularis, *Hemsl.* (*sp. nov.*) ; foliis cum floribus coætaneis, floribus solitariis oppositifoliis, petalis subæqualibus sesquipollicaribus 5–7-nerviis, carpellis sessilibus, ovulis 6 biseriatis.

Hab. Cozumel Island, Yucatan, *Gaumer.*

Arbor 20-pedalis (*Gaumer*), ramis ultimis gracilibus pubescentibus apice tantum foliiferis floriferisque. *Folia* cum floribus coætanea (juniora tantum visa) breviter petiolata, tenuia, molliter pubescentia, oblongo-elliptica, $1\frac{1}{2}$–$2\frac{1}{2}$ poll. longa, acuta, basi cuneata vel interdum fere rotundata, venis primariis secundariisque conspicue subtus elevatis. *Flores* solitarii, oppositifolii, breviter pedunculati ; pedunculi circiter 4 lineas longi, basi 1-bracteati, bractea ovato-oblonga obtusa subtus hirsuta, pedunculum æquante. *Sepala* ovata, vix acuta, circiter 4 lineas longa, extus piloso-hirsuta, longitudinaliter 7-nervia. *Petala* subæqualia, lanceolato-oblonga, obtusa vel subacuta, sesquipollicaria, longitudinaliter 5–7-nervia, nervis dorso prominentibus hirsutis. *Antheræ* numerosæ, sessiles, connectivo ultra loculos truncato-expanso. *Carpella* ad 6, sessilia, hirsuta ; ovula 6, biseriata. *Fructus* deest.—W. B. Hemsley.

Fig. 1. A flower with the petals removed. 2. A sepal. 3. A petal. 4. Back view of a stamen. 5. Front view of the same. 6. Torus with the stamens removed, showing the carpels. 7. A carpel. 8. Longitudinal section of the same, showing the ovules.

M.S.del et lith

Asimina insularis, Hemsl.

Plate 1515.

SYNDICLIS PARADOXA, *Hook. f.*

Laurineæ, Tribe Perseaceæ.

S. paradoxa, *Hook. f. Fl. Brit. Ind.* iv. *ined.*

Hab. Bhotan Himalaya, *Booth.*

Arbor glabra, ramulis gracilibus apice foliosis, junioribus canis pubescentibusve. *Folia* alterna, petiolata, penninervia, 3–5 poll. longa, 2–2½ poll. lata, obovato-oblonga, acuminata, basi acuta, submembranacea, utrinque reticulatim nervosa, nervis utrinque 10–12 tenuibus; petiolo ½ poll. longo, gracili. *Flores* hermaphroditi, in paniculas axillares dispositi, minuti, pedunculo ramisque gracilibus; flores $\frac{1}{10}$ poll. diametro, gracile pedicellati, pedicellis sub flore paullo incrassatis. *Perianthii* segmenta 4, brevia, latiora quam longa, subreniformia, glanduloso-punctata, decidua. *Antheræ* 4, perianthii segmentis oppositæ, sessiles, cuneiformes, scaberulæ et glandulosæ, loculo apicem versus unico parvulo, valvula 2-fida v. emarginata demum recurva clauso; staminodia 4, minuta, lanceolata, hirsuta, antheris alternantia? *Ovarium* glabrum, conico-ovoideum, in stylum apice acutum attenuatum. *Fructus* ignotus.

A very remarkable genus, allied to *Endiandra*, the only one of the Order with a 1-celled ovary with a single valve, the emargination of which latter possibly indicates that it and the cell are formed by the confluence of two.—J. D. Hooker.

Fig. 1. Flower-bud and bract. 2. Flower. 3. Perianth-segment. 4, 5. Stamens. 6. Staminode. 7. Pistil. *All enlarged.*

M.S.del et lith.

Syndiclis paradoxa, Hk.f.

Plate 1516.

BRAVAISIA TUBIFLORA, *Hemsl.*

Acanthaceæ.

B. tubiflora, *Hemsl.* (*sp. nov.*); foliis parvis subcoriaceis venis inconspicuis, floribus subsessilibus hirsutis, corolla supra calycem in tubo stricte cylindrico subite constricta.

Hab. Cozumel Island, Yucatan, *Gaumer*.

Arbor 25-pedalis (*Gaumer*), ramulis ultimis floriferis brevibus gracilibus minute puberulis. *Folia* petiolata, subcoriacea, ovali-elliptica vel oblongo-lanceolata, usque ad 3 poll. longa et $1\frac{1}{2}$ poll. lata, superiora gradatim minora, cum bracteis obovato-spathulata, omnia cito glabrescentia, margine leviter incrassata, apice rotundata vel obtuse acuminata, basi cuneata, venis primariis utrinque 2–5 inconspicuis fere obsoletis. *Flores* albo-purpurei (*Gaumer*), circiter 1 poll. longi, in axillis foliorum solitarii, sæpius sessiles, bibracteati, bracteis spathulatis dimidio brevioribus. *Calycis segmenta* persistentia, fere æqualia, obtusissima vel rotundata, ciliolata, circiter 3 lineas longa. *Corolla* subcampanulata, primum extus dense hirsuta, intus minus hirsuta, demum fere glabrescens, supra calycem in tubo stricte cylindrico subite constricta; limbi lobis contortis brevibus subæqualibus rotundatis. *Stamina* 4, didynama, ad apicem tubi constricti inserta, filamentis parce pilosis; antheræ loculis basi breviter caudatis. *Ovarium* glabrum, loculis biovulatis, ovulis adscendentibus, stylo gracillimo. *Capsula* ovoidea, crustacea, nitida; semina matura non visa.—W. B. Hemsley.

Fig. 1. A bud. 2. Two of the stamens, showing the attachment to the corolla. 3. Front view of a stamen. 4. Back view of the same. 5. A pistil. 6. Longitudinal section of the ovary. 7. Fruit.

M.S. del, et lith.

Bravaisia tubiflora, Hemsl.

Plate 1517.

THEVETIA GAUMERI, *Hemsl.*

Apocynaceæ.

T. Gaumeri, *Hemsl.* (*sp. nov.*); foliis subcoriaceis oblanceolatis venis inconspicuis, floribus mediocribus, corollæ tubo calyci subæquali, lobis angustis oblique spathulatis, faucis squamis filamentisque barbatis, disco maximo carnoso.

Hab. Cozumel Island, Yucatan, *Gaumer*.

Arbor 40–60-pedalis (*Gaumer*), omnino glaberrima, ramulis ultimis crassiusculis nitidis. *Folia* petiolata, tenuiter coriacea, oblanceolata, cum petiolo usque ad 5 poll. longa $1\frac{1}{4}$ lataque, vix acuta, deorsum in petiolum sensim attenuata, supra nitida, subtus pallidiora, venis utrinque immersis inconspicuis. *Flores* citrini (*Gaumer*) mediocres, in cymas erectas subterminales 5–10-floras breviter pedunculatas dispositi, pedicellis $\frac{1}{2}$–1 poll. longis. *Calycis segmenta* crassa, ovato-oblonga, abrupte breviterque acuminata vel apiculata, 4–5 lineas longa, corollæ tubum æquantia, basi intus multisquamulosa vel glandulosa. *Corolla* infundibularis, sesqui- ad bi-pollicaris, tubo brevi, lobis oblique spathulatis truncatis, faucis squamis albo-barbatis. *Stamina* ad medium tubi inserta, filamentis complanatis medio pilis longis albis rigidis dense barbatis. *Antheræ* connectivum apice breviter graciliterque cornutum. *Discus* cupularis, crassus, carnosus, ovarium cingens. *Ovarium* glabrum, loculis biovulatis; stylus filiformis, infra stigma conoideum nudus, stigmate pilis albidis supra instructo. *Fructus* compressus, trigonus, apice $1\frac{1}{4}$ poll. latus, deorsum attenuatus $\frac{3}{4}$ poll. longus, biapiculatus.—W. B. Hemsley.

Fig. 1. A flower-bud, slightly enlarged, erroneously represented as hairy. 2. A sepal, showing the basal squamæ. 3. A stamen attached to a portion of the corolla. 4. Ovary and disk. 5. Fruit, natural size.

Plate 1518.

BUXUS MACOWANI, *Oliv.*

Euphorbiaceæ, Tribe Buxeæ.

B. MacOwani, *Oliv.* (*sp. nov.*) ; ramulis ultimis puberulis glabratisve, foliis oblanceolato- vel obovato-ellipticis sæpius obtusis basi in petiolum brevem angustatis, floribus monoicis, fl. ♂ sessilibus v. subsessilibus, antheris sessilibus, ovarii rudimentum obsoletum, fl. ♀ breviter pedicellatis pedicello bracteolato.

Hab. Kaffraria, *Mr. Hutchins.*

Arborescens. *Folia* coriacea evenia, $\frac{1}{2}$–$\frac{3}{4}$ poll. longa, 3–5 lin. lata. *Inflorescentia* axillaris unisexualis vel androgyna. *Flores* ♂ solitarii v. geminati subsessiles ; bracteolis perianthio multo brevioribus ovato-rotundatis coriaceis ; perianthii segmentis 4 late ovatis. *Antheræ* majusculæ sessiles, longitudinaliter subintrorsum dehiscentes, apice breviter obtuse apiculatæ, perianthio triplo longiores. *Ovarii rudimentum* obsoletum ; fl. ♀ pedicellati bracteolis ovatis coriaceis ; perianthii segmentis 4 late ovatis ovarium glabrum æquantibus. *Styli* adscendentes ovario æquilongi apice crassiusculi intus sulcati emarginati, tempore fructifero incurvi.

The discovery of this new Box in South Africa is of special interest on several grounds. It is the first representative of the genus in that region. A species occurs in Somali-land (*B. Hildebrandtii*, Baill.), another in Madagascar (*B. madagascaria*, Baill.)—both of these quite distinct from our present plant—and my allied genus *Notobuxus*, the ♂ flowers of which are hexandrous, in Natal. Then we have in the sessile anthers and suppression of the ovary-rudiment in the male flower a noteworthy departure from the normal generic character. In the latter particular it agrees with *Notobuxus*. Finally, we have good promise of an important economic application in its wood, which Mr. MacOwan informs us 'is reported on as being equal to the best Turkey Box, and to have been tried in actual use by wood-engravers.' [1]

[1] The following extracts are from the Report of the Superintendent of Woods and Forests (Cape of Good Hope) for 1884. The Conservator of Forests, King William's Town, reports (p. 23) : 'The coast forests have come into notice during the year, by the

We are indebted to Mr. MacOwan for a good series of specimens—all, indeed, that he possessed—sent to him by Mr. Hutchins, Forest Conservator at King William's Town. I ought to explain that a memorandum from Mr. MacOwan, requesting that the proposed specific name should be changed, reached me, I regret to say, too late for compliance, the plate having been printed off. As it stands, however, we have this interesting species linked, so long as our present binomial system holds, with South Africa, through the name of one distinguished for his many valuable contributions to our knowledge of its botany.—D. Oliver.

Fig. 1. Portion of flower-bearing branch, leaves removed. 2. Male flower. 3, 4, 5. Anthers, front and back. 6. Female flower. 7. Same, perianth open. 8. Transverse section of ovary. 9. Unripe fruit. *Enlarged.*

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discovery that the so-called Cape Box is of value for engraving and other purposes for which real boxwood is used. The area of box-producing forest in the Buffalo River valley is estimated at fifteen square miles. Box also occurs in the valley of the Keiskama River, near the coast, but has not as yet been detected west of this in the valleys of the Fish River, Kowie River, and Bushman's River.' And again (p. 51), under 'East London Forests:' 'The event of the year for these forests has been the discovery of the commercial value of Cape boxwood. This is a small tree like the generality of trees in the East London forests. It is rarely met with over a foot in diameter by twenty-five of bole, but it is sufficiently abundant to furnish a large supply of wood. Submitted to an expert it has been declared to be worth about one penny a cubic inch, if seasoned free from cracks. Cape Box (Kafir, Gara-gara) does not appear to coppice, but has a good natural reproduction from seed. The tree was placed on the reserved list a year ago; previous to that it had been sold at five shillings the wagonload for firewood.' See also note by Mr. Jackson on a 'New Boxwood,' *Journ. Soc. Arts*, 1886, p. 465.

M.S. del. et lith.

Buxus Macowani, Oliv,

Plate 1519.

NOTOTHIXOS MALAYANUS, *Oliv.*

Loranthaceæ.

N. malayanus, *Oliv.* (*sp. nov.*); minute glanduloso-puberulus, foliis obovatis obtusis coriaceis obsolete trinerviis petiolatis, junioribus aureo-puberulis, capitulis foliis multo brevioribus, breviter pedunculatis compressis sæpius 3–7-floris, floribus uniseriatis radiatim dispositis.

Hab. Penang, *Mr. C. Curtis*, No. 233.

Folia $\frac{3}{4}$–1 poll. longa, $\frac{1}{2}$–$\frac{3}{4}$ poll. lata, lamina basi in petiolum 1–$2\frac{1}{2}$ lin. longum cuneatim angustata. *Capitula* minuta; pedunculus 1–3 lin. longus. *Flores* puberuli.

The genus was previously known from Australia and Ceylon. Our new species is more nearly allied to *N. subaureus*, Oliv., of Eastern Australia than to any other.—D. Oliver.

Fig. 1. Flowering capitulum. 2. Bud of male flower. 3. Same in section. 4. Perianth-segment and opposed anther. 5. Anther, inner face. 6. Fruiting capitulum. 7. Female flower passing into fruit. 8. Same, perianth-segments removed. *All enlarged.*

M. S. del, et lith.

Notothixos malayanus. Oliv.

Plate 1520.

PARAMERIA DENSIFLORA, *Oliv.*

Apocynaceæ.

P. densiflora, *Oliv.* (*sp. nov.*); ramulis teretibus ferrugineo-pubescentibus, foliis oblongo- vel oblanceolato-ellipticis breviter obtusiuscule acuminatis basi obtusis subcordatisve supra glabratis subtus in nervis hirtellis, inflorescentia terminali multiflora hirtella paniculata basi trichotoma foliis breviore, bracteis minutis ovatis, calyce parvo corollæ tubo quadruplo breviore, folliculis elongatis distanter torulosis.

Hab. Government Hill, Penang, *C. Curtis*, No. 158.

Folia 5–6½ poll. longa, 1¾–2½ poll. lata; petiolus 1½–3 lin. longus. *Panicula* congesta 3–4 poll. longa atque lata; pedicelli hirtelli flore æquilongi v. breviores. *Calyx* segmentis ovatis acutis hirtis intus glabris. *Corolla* tubo parce hirtello brevi cylindraceo limbo subæquilongo, lobis glabris sinistrorsum obtegentibus. *Stamina* ad basin corollæ inserta, filamentis brevissimis. *Folliculi* graciles 11–14 poll. longi torulosi glabrescentes 10–12-spermi.—D. Oliver.

Fig. 1. Flowers. 2. Calyx-segment. 3. Stamens. 4. Anther. 5. Pistil and disk. 6. Follicle. 7. Seed. *All, except fig.* 6, *enlarged.*

Plate 1521.

STROPHANTHUS JACKIANUS, *Wall.*

Apocynaceæ, Tribe Echitideæ.

S. Jackianus, *Wall. Cat. Herb. Ind. Or.* No. 1643; foliis linearioblongis lanceolatisve obtuse acuminatis subtus scaberulis junioribus tomentellis, cymis axillaribus paucifloris, corollæ tubo brevi lobis linearilanceolatis, seminibus lineari-elongatis. *A. DC. Prodr.* viii. 419; *Hook. f. Fl. Brit. Ind.* iii. 656.

Hab. Penang, *Jack*; near the coast, *C. Curtis.*

Frutex fere glaber, ramulis oppositis teretibus, ultimis sub lente foliisque subtus scaberulis. *Folia* 3–4 poll. longa, attenuato-acuminata, supra scaberula, subtus pallida, nervis utrinque 6–10; petiolo $\frac{1}{10}$–$\frac{1}{6}$ poll. longo. *Cymæ* axillares et subterminales, 2–4 floræ; rhachis $\frac{1}{2}$-pollicaris, crassiuscula, bracteis parvis ovatis subimbricatis instructa; flores breviter pedicellati, expansi 2 poll. diametro, pedicello calyceque pubescentibus. *Sepala* ovata, acuminata, basi appendiculata. *Corollæ* tubus lobis multo brevior, ore vix dilatato, appendiculis 5 aucto; lobi attenuatoacuminati, alabastro sinistrorsum convoluti. *Antheræ* subsessiles, elongatæ, acuminatæ, dorso pubescentes. *Ovarium* ovoideum, glabrum. *Folliculi* 8–12 poll. longi, crassitie pennæ anserinæ, cylindracei, paralleli, rostrato-attenuati, glabri. *Semina* $\frac{1}{2}$ poll. longa, angusta.

Excellent specimens, communicated by Mr. Curtis, Superintendent of the Penang Botanical Gardens, enable me to give an amended description of this species, of which Wallich's specimens were very incomplete. It differs from its congeners in the sinistrorse æstivation of the corolla, and from the section in which it is placed in the Indian Flora by the corolla-lobes being much longer than the tube.—J. D. Hooker.

Fig. 1. Flower-bud and bracteole. 2. Sepal. 3 Portion of corolla laid open. 4, 5. Stamen. 6. Ovary. 7. Fruit. *All but fig. 7 enlarged.*

M S. del, et lith.

Strophanthus Jackianus, Wall.

Plate 1522.

MICROMERIA PILOSA, *Benth.*

Labiatæ, Tribe Satureineæ.

M. (§ **Hesperothymus**) **pilosa,** *Bentham in Gen. Plant.* ii. 1188; herba prostrata, ramulis floriferis gracilibus elongatis laxe pilosulis, foliis breviter petiolatis ovatis obtusis v. acutiusculis pauciserratis supra et subtus præcipue in nervis pilosulis, floribus in axillis solitariis pedunculatis, pedunculis gracilibus folio subæquilongis medio bibracteolatis, corolla calyce 3–4-plo longiore.

Hab. Faku's territory, *Dr. Sutherland*; Natal, *J. Medley Wood.*

Folia $\frac{1}{2}$–$\frac{2}{3}$ poll. longa, 5–6 lin. lata. *Flores* 5–6 lin. longi. *Calyx* hirtellus, dentibus subæqualibus erectis acutis. *Corolla* labio postico emarginato lobis obtusis, antico lobo centrali rotundato lateralibus majore, intus pilosula.—D. Oliver.

Fig. 1. Calyx, laid open. 2. Flower. 3. Corolla, laid open. 4. Ovary. 5. Stigma. *Enlarged.*

M.S. del, et lith

Micromeria pilosa, Benth.

CEPHALOTAXUS MANNII.

CONIFERÆ, Tribe TAXODIEÆ.

C. Mannii, *Hook. f.*; foliis linearibus attenuato-acuminatis basi acutis obtusisve vix falcatis subtus viridibus, amentis masculis globosis pedunculatis, antheris cordato-ovatis basi 3-lobis apice mucronatis, fœmineis 3–4 in pedunculum communem pedicellatis globosis, bracteis minutis obtusis, seminibus obovoideo-oblongis.

HAB. Khasia Mts., in Lankhla woods, about 5,000 ft., *Gustav Mann.*

Arbor parva, trunco 6–10 poll. diam. *Folia* 2-pollicaria, $\frac{1}{8}$–$\frac{1}{6}$ poll. lata, coriacea, recta v. subfalcata, disticha, patentia, supra nitida, subtus pallidiora stomatibus minutissimis inconspicuis, marginibus sicco recurvis, costa utrinque valida, petiolo perbrevi. *Amenta mascula* $\frac{1}{4}$ poll. longa, pedunculo æquilongo squamis imbricatis ovatis tecto; bracteæ late ovatæ, acuminatæ; antheræ ad 12, dense confertæ. *Amenta fœminea* masculis minora, pedicellata, pedicello squamoso; ovula late ampullacea in columnam brevem spicata; bracteæ rhachi adnatæ, ovatæ, obtusæ. *Semen* $1\frac{1}{2}$ poll. longum, basi attenuatum, apice mucronatum; testa drupacea intus crustacea, albumine duro.

A very distinct species, according to Mr. Clarke, who by letter first drew my attention to it, not uncommon in the Khasia mountains, but so like *Taxus baccata* as to be easily mistaken for it. The total absence of white on either surface of the leaves distinguishes it from another species which occurs in Griffiths's collection from the Mishmi country, with more obtuse leaves and white beneath; this last also occurs in Munnipore.—J. D. HOOKER.

Fig. 1. Branch with female flowers. 2. Transverse section of leaf. 3. Male ament. 4. Bract of same and stamens. 5, 6. Stamens. 7. Female branch with fruit. 8. Female ament. 9. Ovule. *All but figs.* 1 *and* 7 *enlarged.*

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Plate 1524.

RASPALIA PASSERINOIDES, *Presl.*

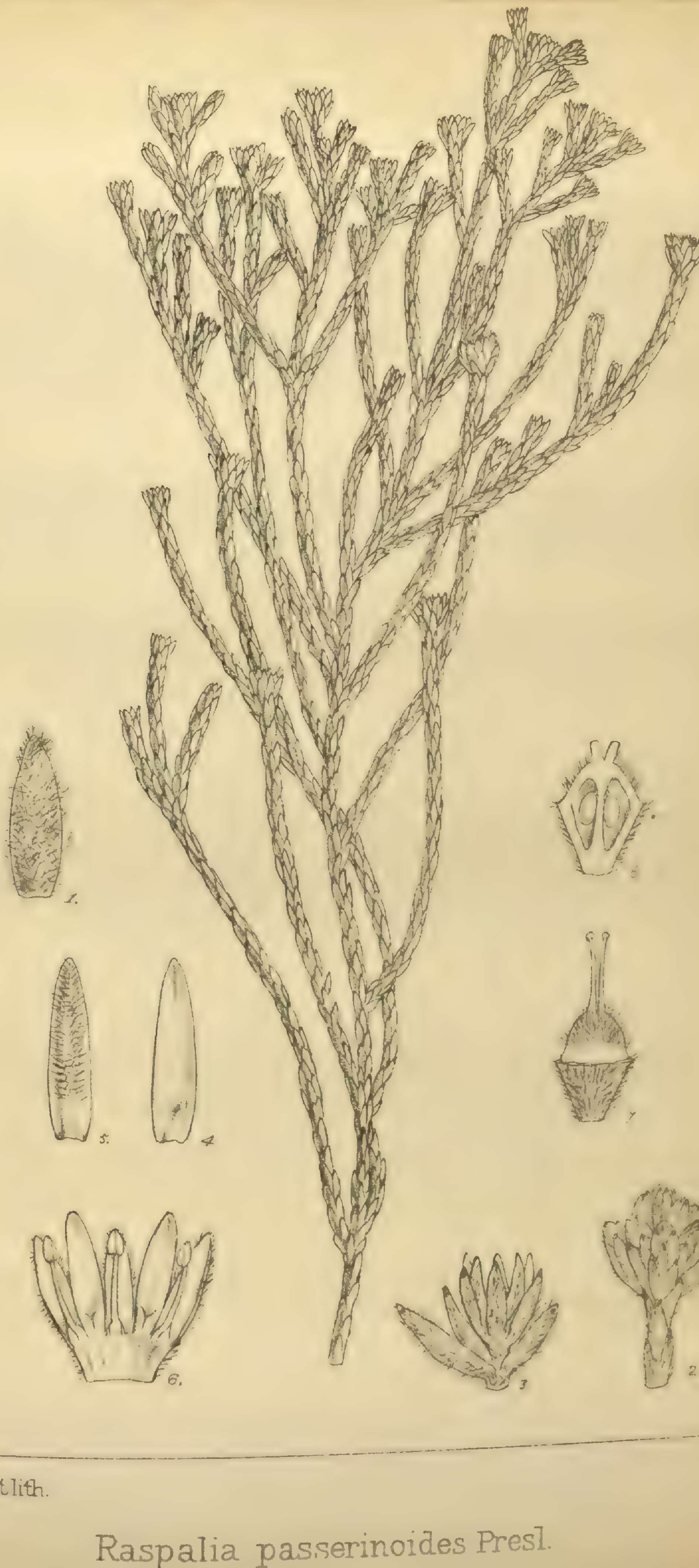
Bruniaceæ.

R. passerinoides, *Presl, Bot. Bem.* 39; ramulis copiosis fastigiatis tomentellis, foliis arcte appressis carnosulis ovato-oblongis obtusis junioribus callo nigro instructis dorso cano-pubescentibus deinde glabratis facie interiore plus minus sericeo-pubescentibus, capitulis terminalibus plurifloris interdum quasi-corymbosis, floribus sessilibus sericeo-lanatis.—*Brunia passerinoides*, Schlecht. in Linnæa, vi. (1831) 190. *Berardia phylicoides*, Brongn. ex Sonder in Harv. et Sond. Fl. Cap. ii. 321.

Hab. Zwarteberg, Caledon, *Ecklen and Zeyher*; mountain slopes behind Houw Hoek, *H. Bolus*.

Folia 1 lin. longa. *Capitula* ¼ poll. lata. *Calyx* lobis lineari-oblongis dorso dense sericeis. *Petala* calycem paulo superantia lineari-oblonga obtusiuscula colorata dorso sericea. *Antheræ* ovato- v. oblongo-ellipticæ. *Ovarium* semi-inferum apice dense sericeum; styli glabrati.—D. Oliver.

Fig. 1. Young leaf, dorsal view. 2. Capitulum. 3. Flower and bracts. 4, 5. Petal, inner and outer face. 6. Part of flower, laid open. 7. Pistil, calyx-limb removed. 8. Longitudinal section of ovary. *All enlarged.*



M S del et lith.

Raspalia passerinoides Presl.

Plate 1525.

ARGYROLOBIUM STENORRHIZON, *Oliv.*

Leguminosæ, Tribe Genisteæ.

A. stenorrhizon, *Oliv.* (*sp. nov.*); radice anguste tuberosa elongata, caule gracili erecto appresse sericeo, foliis petiolatis foliolis linearibus acutiusculis arcte conduplicatis appresse cano-sericeis facie interiore glabris, stipulis parvis subulatis persistentibus, floribus brevissime pedunculatis geminatis solitariisve, calyce dense sericeo bilabiato labio superiore profunde bifido lobis lanceolatis acutis vexillo sericeo brevioribus, labio inferiore breviter trifidis lobis subæqualibus, legumine sericeo.

Hab. Near Rondebosch, *H. Bolus*; *Herb. Zeyher*, 387, &c.

Radix gracilis attenuata teres 2–3 poll. longa 1–1½ lin. (in spp. exsicc.) diam. *Caulis* 3–5 poll. *Folia* petiolo $\frac{1}{6}$–$\frac{1}{3}$ poll. longo; foliola $\frac{1}{2}$–$\frac{3}{4}$ longa; stipulæ $\frac{1}{15}$ poll. longæ. *Flores* 4–5 lin. longi atque lati; bracteolis parvis anguste linearibus; vexillum orbiculatum $\frac{1}{3}$ poll. latum; alæ obtusissimæ; carina obtusa. *Stamina* vagina supra profunde fissa. *Ovarium* dense pilosum pluriovulatum; stigma capitatum. *Legumen* $\frac{2}{3}$ poll. longum.

This plant, written up by Dr. Harvey himself as *A. filiforme β uniflorum* in the Kew Herbarium, my colleague, Mr. Brown, rightly finds different from Harvey's *A. uniflorum*, Fl. Capensis, ii. 72 (under which he cites this MS. Herbarium name). Unfortunately, moreover, the specific name *uniflorum* was preoccupied by Jaubert and Spach (Ill. Pl. Orient. i. 115), so that for this name I propose to substitute *Harveianum*. It is therefore to *A. Harveianum* that Harvey's description applies. It is much taller than *A. stenorrhizon*, glabrescent as to stem and leaves or but thinly sericeous, the leaves very shortly petiolate, petioles of upper leaves shorter or not much exceeding the stipules and calyx thinly silky. We have it from Grahamstown, *Mr. MacOwan*, No. 172; eastern frontier, *Mrs. Barber*; Kaffraria, *Rev. R. Baur*, No. 527.—D. Oliver.

Fig. 1. Folded leaflet. 2. Flower. 3. Vexillum. 4. Ala. 5. Carina. 6. Staminal sheath. 7. Pistil.

M.S. del et lith.

Argyrolobium stenorrhizon, Oliv.

Plate 1526.

PLAGIOSPERMUM SINENSE, *Oliv.*

Celastraceæ.

Plagiospermum, *Oliv.* (*gen. nov.*) ; calyx tubo turbinato, limbo 5-fido lobis ovato-deltoideis. Petala 5 rotundata v. ovato-rotundata breviter unguiculata subintegra, margini calycis inserta. Stamina 10 perigyna, 5 interiora (antipetala) disco prope marginem inserta, 5 exteriora margini disci inserta ; filamenta subulata v. anguste linearia, anthera rotundata bilocularis longitudinaliter dehiscens, filamento subæquilonga. Discus carnosulus tubo calycis adnatus margine prominulo. Pistillum monocarpicum ; ovarium liberum sessile 1-loculare ; ovula geminata collateralia lateraliter affixa ; stylus lateralis ovario æquilongus, stigmate leviter dilatato apice truncato v. leviter depresso. Fructus . . . .

Frutex *spinescens, ramulis subteretibus epidermide albescenti tenuiter papyracea denique fissa ; spinis axillaribus brevibus rectiusculis acutis.* Folia *alterna in axillis fasciculata petiolata ovali- vel oblongo-lanceolata apicem versus angustata obtusiuscula v. acuminata mucronulata basi in petiolum angustata integra v. obsolete sinuata, tempore florifero membranacea glabra, minute stipulata ; stipulis subulatis.* Flores *pedunculati in axillis* 1–4-*fasciculati, folio breviores.*

P. sinense, *Oliv.* (*sp. unica*).

Folia $1\frac{1}{4}$–$1\frac{3}{4}$ poll. longa, 3–5 lin. lata ; petiolus $\frac{1}{4}$–$\frac{1}{2}$ poll. longus. *Pedunculi* 4–7 lin. longi graciles. *Flores* $\frac{1}{2}$ poll. diam.

Hab. North China, prov. Sching-King, *Mr. John Ross* ; Mukden to Yaloo River, *Rev. J. Webster.*

I have felt some little doubt as to the affinity, whether with *Rosaceæ* or *Celastraceæ*, of this interesting plant in the absence of fruit, but on the whole I take it to be allied to the exceptional genus *Glossopetalon*, described by Dr. Asa Gray in 'Plantæ Wrightianæ,' pt. ii., p. 29, t. xii. B.—D. Oliver.

Fig. 1. Flower. 2. Calyx (too strongly ciliolate). 3. Petal. 4. Ovary with calyx-tube. 5. Ovary, longitudinal section. *Enlarged.*

M.S. del. et lith.

Plagiospermum sinense, Oliv.

Plate 1527.

ANISOTES PARVIFOLIUS, *Oliv.*

Acanthaceæ. Tribe Justicieæ.

A. parvifolius, *Oliv.* (*sp. nov.*) ; ramis teretibus cortice albido, foliis subcoriaceis oblanceolatis obovatisve basi in petiolum cuneatim angustatis glabris, floribus 2–4-nis fasciculatis subsessilibus ramulos brevissimos laterales terminantibus, calyce 5-partito lobis lanceolatis acutis appresse sericeis, corolla puberula v. glabrata longissime bilabiata, labio postico bidentato, antico breviter trifido lobo centrali paullo latiore oblongo obtuso, antherarum loculis leviter obliquis, basi mucronulatis.

Hab. Kilimanjaro Expedition, 40 to 60 miles inland, *H. H. Johnston.*

Folia $\frac{3}{4}$–1 poll. longa, $3\frac{1}{2}$–5 lin. lata. *Flores* 2–$2\frac{1}{4}$ poll. longi : calyx 3–4 lin. longus : bracteæ sepalis conformes.

I have not carefully looked into the difference, but I doubt if *Himantochilus*, T. Anders. (Gen. Plant. ii. 1117) be generically distinct from *Anisotes*.—D. Oliver.

Fig. 1. Bracts and calyx. 2–3. Anther. 4. Ovary and disk. 5. Longitudinal section of same. *Enlarged.*

M.S. del, et lith.

Anisotes parvifolius, Oliv.

Plate 1528.

SOMALIA DIFFUSA, *Oliv.*

Acanthaceæ. Tribe Justicieæ.

Somalia, *Oliv.* (*gen. nov.*); calyx alte 4-fidus, segmentis linearilanceolatis acuminatis interioribus brevioribus. Corolla bilabiata labiis tubo æquilongis, labio antico obovato obtuso integro æstivatione exteriore, postico 4 fido segmentis oblanceolatis obovatisve obtusis duobus lateralibus cæteris paullo majoribus. Stamina 2, filamentis a basi distinctis; antheræ e tubo exsertæ ellipsoideæ, basi bifidæ apice mucronulatæ biloculares, loculis æqualibus basi obtusis parallelis inappendiculatis; staminodia minutissima 3. Ovarium pubescens disco hypogyno oblique cupuliforme basi cinctum, biloculare; ovula in loculis solitaria adscendentia; stylus gracilis apice leviter incrassatus. Fructus . . . .

Herba (v. suffrutex) *diffusa a basi ramosa, ramulis nodosis strigosis.* Folia *opposita lineari-oblonga acutiuscula basi in petiolum angustata,* $\frac{3}{4}$–$1\frac{1}{4}$ *poll. longa,* $1\frac{1}{2}$–2 *lin. lata, paginis utrinque setis rigidis appressis mediofixis strigosis; folia inferiora ramulorum sæpius etiam pilis brevibus pubescenti-hirtella.* Flores $\frac{3}{4}$ *poll. longi axillares subsessiles bibracteati; bracteis herbaceis anguste spathulato-linearibus calycem æquantibus.*

S. diffusa, *Oliv.* (*sp. unica*).

Hab. Somaliland, *Messrs. James and Thrupp.*

Remarkable in the solitary ascending ovules.—D. Oliver.

Fig. 1. Calyx and bracts. 2. Corolla laid open. 3. Stamen. 4. Ovary and disk. 5. Longitudinal section of same. *Enlarged.*

Plate 1529.

OCIMUM TOMENTOSUM, *Oliv.*

Labiateæ. Tribe Ocimoideæ.

O. tomentosum, *Oliv.* (*sp. nov.*) ; suffrutescens pilis stellatis cano-tomentosum ; foliis ovatis obtusis integris petiolatis, verticillastris circ. 6-floris, pedicellis calycibusque dense tomentosis, calycis tubo subtruncato lobo postico late ovato-rotundato breviter decurrente, lateralibus brevissimis subulatis, lobo centrali antico breviter apiculato, corollæ tubo calycem æquante, labiis subæquilongis, labio postico breviter 4-fido segmentis rotundatis obtusis, staminibus exsertis posticis basi appendiculatis appendiculis pilosis.

Hab. Hahi, Somaliland, *Messrs. James and Thrupp.*

Folia $\frac{1}{2}$–$\frac{3}{4}$ poll. longa, $\frac{1}{2}$–$\frac{2}{3}$ poll. lata; petiolus $1\frac{1}{2}$–2 lin. longus. *Inflorescentia* 1–$1\frac{1}{2}$ poll. longa tomentosa ; internodiis $\frac{1}{3}$–$\frac{1}{2}$ poll. longis. *Flores* ut videtur purpurei ; corolla 3–4 lin. longa.—D. Oliver.

Fig. 1. Detached flower. 2. Corolla laid open. 3. Ovary and disk. *Enlarged.*

M.S.del. et lith.

Ocymum tomentosum, Oliv.

CROTALARIA JAMESII, *Oliv.*

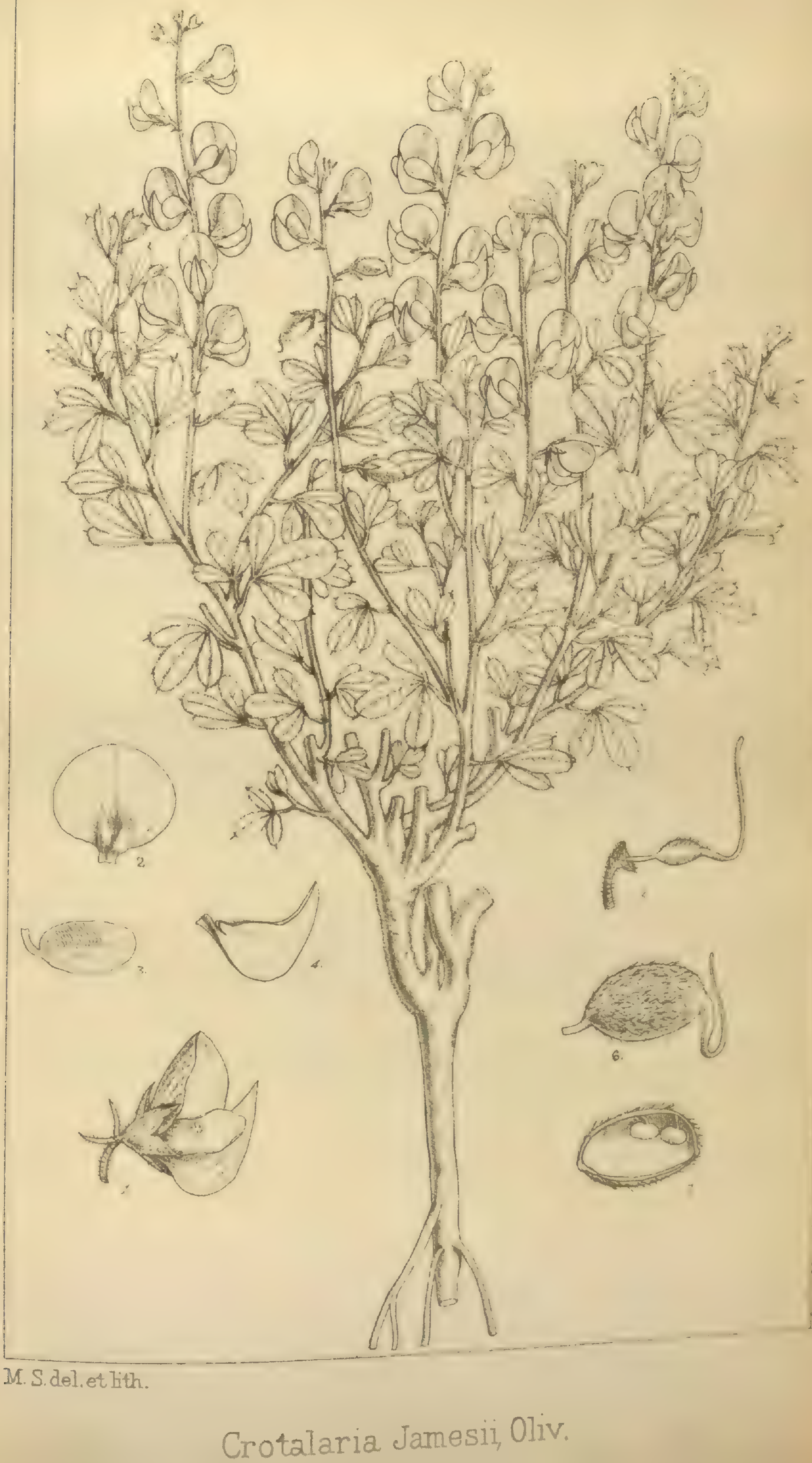
Leguminosæ. Tribe Genisteæ.

C. Jamesii, *Oliv.* (*sp. nov.*); fruticulus humilis ($\frac{1}{3}$–$\frac{3}{4}$-pedalis) e basi ramosus, ramulis pilis albidis appresse sericeis, foliis 3-foliolatis petiolatis petiolo sericeo foliolis sæpius breviore, foliolis obovatis oblanceolatisve obtusis apiculatis brevissime petiolulatis v. subsessilibus supra glabrata subtus parce albido-pilosulis, stipulis patentibus brevibus herbaceis lineari-subulatis, racemis dissitifloris (2–3 poll. longis) sericeis 6–10 floris terminalibus v. oppositifoliis ramulos foliiferos superantibus, bracteis parvis lanceolatis pedicello brevioribus, bracteolis subulatis calycis tubo brevioribus, calyce 5-fido albido-strigoso lobis subæqualibus deltoideo-lanceolatis acutis corolla lutea 2–3-plo breviore, vexillo late orbiculato, alis obtusis, carina acutiuscula vexillo æquilonga, ovario breviter stipitato sericeo 6–9-ovulato stylo breviore, legumine late ellipsoideo 2–3 lin. longo 2–3-spermo, pedicello recurvo.

Hab. Hahi and Adda Gallah, Somaliland, *Messrs. James and Thrupp.*

Folia $\frac{1}{3}$–$\frac{1}{2}$ poll. longa. *Flores* $\frac{1}{4}$ poll. longi.—D. Oliver.

Fig. 1. Flower. 2. Vexillum. 3. Ala. 4. Carina. 5. Pistil. 6. Legume. 7. Same laid open. *Enlarged.*



M. S. del. et lith.

Crotalaria Jamesii, Oliv.

Plate 1531.

SLOETIA PENANGIANA, *Oliv.*

Urticaceæ. Tribe Moreæ.

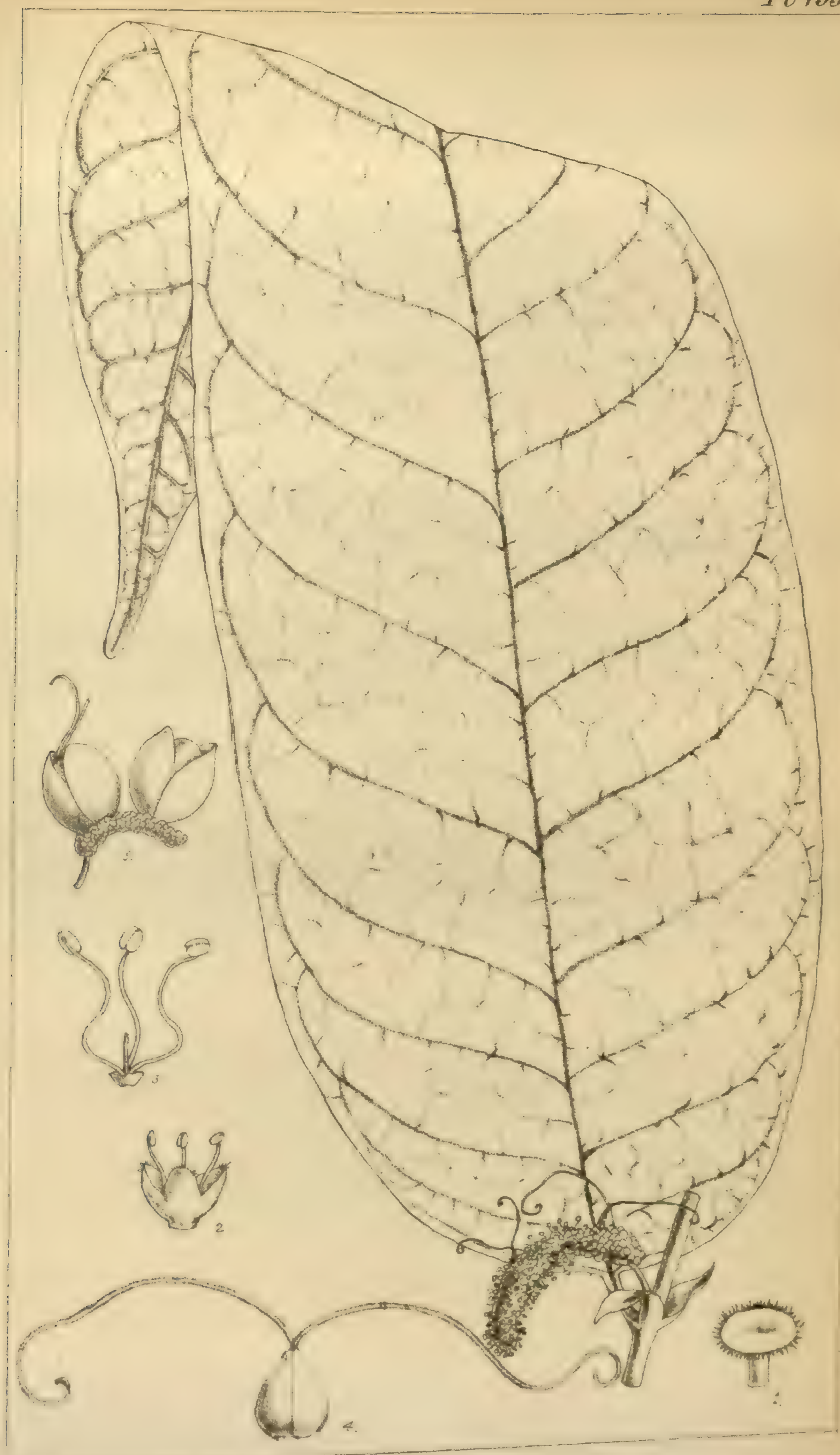
S. penangiana, *Oliv.* (*sp. nov.*); foliis elongatis e basi late rotundata oblongo-lanceolatis v. -ovatis apice breviter acuminatis supra glabris subtus obsolete scabridiusculis opacis.

Hab. Government Hill, Penang, *Mr. C. Curtis.*

Rami graciles tactu scaberuli, crassitie pennæ corvinæ. *Folia* breviter petiolata 8–12 poll. longa, basi 2–4 poll. lata; petiolus $\frac{1}{6}$–$\frac{1}{4}$ poll. longus. *Stipulæ* lanceolatæ acuminatæ, deciduæ, $\frac{1}{4}$–$\frac{1}{2}$ poll. longæ. Amenta (in spp. nostris) solitaria breviter pedunculata $\frac{1}{2}$–$\frac{3}{4}$ poll. longa.

Nearly allied to *S. Sideroxylon*, Teijs. and Binnend. described and figured by the late Mr. S. Kurz in the 'Journal of the Linnean Society,' vol. viii., p. 168, tab. 13; differing in the broadly rounded base of the leaves, which narrow upwards, in their more obscure ultimate reticulation beneath, and in the shorter petioles.—D. Oliver.

Fig. 1. Peltate bract. 2. Staminate flower. 3. Stamens and central rudiment. 4. Pistillate flower, with perianth. 5. Remains of receptacle with two young fruits. *Enlarged.*



M.S. del. et lith.

Sloetia penangiana, Oliv.

Plate 1532.

PRATIA BORNEENSIS, *Hemsl.*

Campanulaceæ. Tribe Lobelieæ.

P. borneensis, *Hemsl.* (*sp. nov.*) ; habitu foliisque *Pratiæ montanæ*, sed floribus racemosis ut in *Colensoa*.

Hab. Sarawak, in Borneo, at 1,500 feet, *Mr. Hullett*, 1885.

Herba, ut videtur, vagans, præter inflorescentia undique glabra vel cito glabrescens, ramulis nitidis cavis. *Folia* petiolata membranacea, ovato-lanceolata, cum petiolo 4–6 poll. longa, longe acuminata, basi cuneata, calloso-serrata. *Flores* parce puberuli, semi-pollicares, longiuscule pedicellati, racemosi, racemis puberulis oppositifoliis vel subterminalibus, usque ad 6 poll. longis bracteis parvis subulatis munitis. *Calycis segmenta* linearia, in fructu persistentia. *Corolla* postice fere ad basin fissa, lobis 2 posterioribus multo brevioribus. *Antheræ* apice breviter barbato-cristatæ. *Ovarium* 2-loculare, loculis multiovulatis; stylus staminibus æquilongus; stigma amplum, bilobum. *Bacca* speciosa, purpurea (*Hullett*) ; semina numerosissima fere plana, circumscriptione variabilia, quadrata ad cuneata, minutissime punctata, brunnea.

This plant combines the chief distinctive characters of *Colensoa* and *Pratia montana* ; therefore I follow Sir Joseph Hooker's suggestion, and unite the two genera under the older name *Pratia*. The species may be conveniently arranged in three sections as follows :—

1. *Eupratia*. Small-leaved creeping or trailing herbs, solitary axillary flowers, and with lenticular or oblong seeds.

2. *Speirema*. An erect herb with large leaves, solitary axillary flowers, and lenticular seeds.—*Pratia montana*, Hassk.

3. *Colensoa*. Erect or rambling herbs with large leaves, racemose flowers, large stigmas, and spherical or nearly flat seeds.—*P. physaloides*, Hemsl., and *P. borneensis*, Hemsl.—W. B. Hemsley.

Fig. 1. A flower. 2. Two of the united stamens. 3. Upper part of style with stigma. 4. Seeds. *Enlarged.*

M.S.del. et lith.

Pratia borneensis, Hemsl.

Plate 1533.

CLEMATIS LEIOCARPA, *Oliv.*

Ranunculaceæ. Tribe Clematideæ.

C. leiocarpa, *Oliv.* (*sp. nov.*) ; frutex scandens caule glabro ramulis glaucescentibus, foliis petiolatis glaberrimis, foliolis biternatis petiolulatis oblongo-lanceolatis v. -ellipticis acutiusculis integris subcoriaceis subtus pallidioribus paniculis terminalibus v. axillaribus ramulis trichotomiis, bracteis subulatis rigidiusculis, pedicellis ternatis bibracteolatis, sepalis 4 lineari-oblongis coloratis marginibus tomentellis, antheris anguste linearibus muticis filamento glabro (in stam. interioribus) brevioribus, carpellis 10–12 ovario glabro fructiferis sæpius paucioribus lanceolatis sessilibus, stylo persistente plumoso coronatis.

Hab. Ichang, China, *Dr. Henry.*

Foliola $1\frac{1}{2}$–$2\frac{1}{2}$ poll. longa, $\frac{1}{2}$–$\frac{3}{4}$(–1) poll. lata, sæpius biternatis; petiolulus $\frac{1}{2}$–$\frac{3}{4}$ poll. longus. *Flores* alabastro $\frac{1}{2}$ poll. longi.

The extremities of this marked species are dark purplish black, and more or less glaucous. The sepals are also dark. The inner narrowly linear filaments are twice as long as the narrow anthers. I apprehend the relative length of anther and filament may be much more variable than has been supposed. I have not seen the fruit of *C. uncinata*, Champ., but this plant may well prove to be but a form of it.—D. Oliver.

Fig. 1. Sepal. 2. Outer stamen. Carpel (of flower). *Enlarged.*

M S del et lith.

Clematis leiocarpa, Oliv.

Plate 1534.

HYPERICUM LONGISTYLUM, *Oliv.*

Hypericaceæ.

H. longistylum, *Oliv.* (*sp. nov.*); frutex glaberrimus divaricatim ramosus, ramulis gracilibus teretibus cortice mox deciduo, foliis parvis ellipticis obtusis sæpe mucronulatis pellucido-punctatis brevissime petiolatis floribus majusculis ramulos laterales foliiferos terminantibus solitariis breviter pedunculatis, calycis lobis pedunculo subæquilongis oblongo-lanceolatis acutis integris corolla 5–6-plo brevioribus fructiferis recurvis, petalis oblique obovatis longitudinaliter venosis, staminibus breviter 5-adelphis, filamentis gracillimis, antheris rotundatis dorsifixis, ovario glabro, in stylo elongato ovario 3–5-plo longiore apice breviter 5-fido angustato.

Hab. Ichang, China, *Dr. Henry.*

Folia 6–8 lin. longa, 3–5 lin. lata. *Flores* nonnunquam nutantes $1\frac{1}{2}$–2 poll. diam. Stylus gracilis petalis longior. *Fructus* anguste ovoideus septicide 5-valvis $\frac{1}{2}$ poll. longus.

An elegant species, well worthy of introduction for garden culture. The cortex of the young shoots early fissures and separates, as in some *Loniceræ.*—D. Oliver.

Fig. 1. Calyx and pistil. 2. Anthers, front and back. 3. Fruit. 1 and 2 *enlarged.*

M.S. del et lith.

Hypericum longistylum, Oliv.

Plate 1535.

OLIGOCARPUS ACANTHOSPERMUS, *H. Bolus.*

Compositæ. Tribe Calendulaceæ.

O. acanthospermus, *H. Bolus*; decumbens parce pilosulus, foliis linearibus oblanceolatisve utrinque pauce (2–4-)-dentatis, capitulis terminalibus parvis pedunculatis, bracteis involucralibus subuniseriatis 7–8 lineari-lanceolatis acutis laxe setuloso-pilosis, ligulis flavis obsolete 3-denticulatis, antheris basi sagittatis appendicibus per paria connatis, stigmatis (fl. ♂) apice conico bidentato, fructibus crassis glabratis undique echinatis.—*Xenismia acanthosperma*, DC. Prodr. v. 509.

Hab. Near Kookfontein, Namaqualand.—*H. Bolus.*

Herba sæpe multicaulis $\frac{1}{2}$–1 ped., ramis decumbentibus parce ramosis. *Folia* caulina $\frac{1}{2}$–1 poll. longa; inferiora basi longe attenuata. *Capitula* florifera $\frac{1}{4}$–$\frac{1}{2}$ poll. diam., fructifera $\frac{1}{2}$–$\frac{3}{4}$ poll. lata.

Another of the many interesting plants sent us by Mr. Bolus, who identified it with De Candolle's *Xenismia*, a plant known to Dr. Harvey and the authors of the 'Genera Plantarum' only from description. As Mr. Bolus points out in a MS. memorandum, and as suggested in 'Genera Plantarum,' the genus cannot be separated from *Oligocarpus*. —D. Oliver.

Fig. 1. Flowering capitulum. 2. Ray floret. 3. Same, posterior view. 4. Disk floret. 5. Anthers. 6. Style. 7. Ripe fruit. *Enlarged.*

M.S. del et lith

Oligocarpus acanthospermus, Boi.

Plate 1536.

GAZANIA BURCHELLII, *DC.*

Compositæ. Tribe Arctotideæ.

G. Burchellii, *DC. Prodr.* vi. 514; herba annua setosa pedalis e basi ramosa, foliis linearibus vel (lobis utrinque 2–4) pinnatipartitis setoso-scabris, capitulis radiatis pedunculatis involucris turbinatis setosis, laciniis pluriserialibus apice lineari-acuminatis recurvis patentibusve, acheniis basi attenuatis longe albido-pilosis, pappi paleis exterioribus circ. 9 oblongis v. obovatis apice denticulatis.—*Harvey and Sonder, Flora Capensis*, iii. 479, where synonyms are cited.

Hab. Dry bed of the Schaap River, near Spektakel, Namaqualand, *H. Bolus*. Other stations, where it has been collected by Burchell, Lichtenstein, and others, are cited in 'Flora Capensis,' *l. c.*

The plant is sufficiently described in the works cited.—D. Oliver.

Fig. 1. Free portions of involucral bracts. 2. Insertion of ray florets in alveoli at base of inner face of involucre. 3. Disk floret. 4. Achene. 5. Pale of exterior pappus. 6. Anthers. 7. Style. *Enlarged.*

M.S. del et lith

Gazania Burchellii, D C.

Plate 1537.

OLIGOBOTRYA HENRYI, *Baker.*

Liliaceæ. Tribe Polygonateæ.

Oligobotrya, *Baker* (*gen. nov.*) ; *perianthium* corollinum gamophyllum hypocrateriforme, tubo subcylindrico, segmentis oblongis imbricatis patulis trinervatis tubo brevioribus. *Stamina* 6, ad tubi faucem uniseriata, antheris sessilibus oblongis introrsum longitudinaliter dehiscentibus. *Ovarium* globosum sessile triloculare, ovulis in loculo paucis superpositis; stylus brevis cylindricus, stigmatibus parvis ovatis patulis. *Fructus* ignotus.—Herba *perennis chinensis.* Folia *caulina alterna sessilia ovato-oblonga acuta membranacea glabra multinervata.* Flores *albidi in racemis laxis terminalibus simplicibus vel furcatis dispositis, pedicellis brevibus solitariis adscendentibus basi bracteis parvis ovatis membranaceis persistentibus stipatis.*

Oligobotrya Henryi, *Baker* (*sp. unica*).

Hab. Central China, at Patung, *Dr. Henry.*

Caulis simplex gracilis semipedalis vel bipedalis. *Folia* 4–6 poll. longa infra medium 1–2 poll. lata. *Perianthium* 5–6 lin. longum.

This interesting new genus comes in between *Polygonatum* and *Smilacina*, agreeing with the latter in its terminal inflorescence, and with the former in its gamophyllous perianth.—J. G. Baker.

Fig. 1. Flower. 2. Perianth laid open. 3. Pistil. 4. Transverse section of ovary. *Enlarged.*

M.S. del et lith.

Oligobotrya Henryi, Baker.

Plate 1538.

ITEA ILICIFOLIA, *Oliv.*

Saxifragaceæ. Tribe Escallonieæ.

I. ilicifolia, *Oliv.* (*sp. nov.*) glaberrima, foliis late ellipticis tenuiter coriaceis spinuloso-sinuatis, racemis terminalibus solitariis brevissime pedunculatis multifloris folia superantibus, pedicellis demum recurvis, calycis tubo campanulato pedicello æquilongo lobis acute deltoideis, petalis lanceolatis erectis persistentibus, filamentis anguste subulatis petalis æquilongis, stigmate capitato.

Hab. Ichang, China, *Dr. Henry.*

Folia $2\frac{1}{2}$–$3\frac{1}{2}$ poll. longa, $1\frac{3}{4}$–2 poll. lata, costa venisque primariis (utrinque 5–6) subtus prominentibus; petiolus $\frac{1}{3}$ poll. longus. *Racemi* 5–6 poll. longi.—D. Oliver.

Fig. 1. Flower. 2. Petal. 3. Stamens. 4. Fruit. *Enlarged.*

M.S. del. et lith.

Itea ilicifolia, Oliv.

Plate 1539.

ILEX PERNYI, *Franch.*

Ilicineæ.

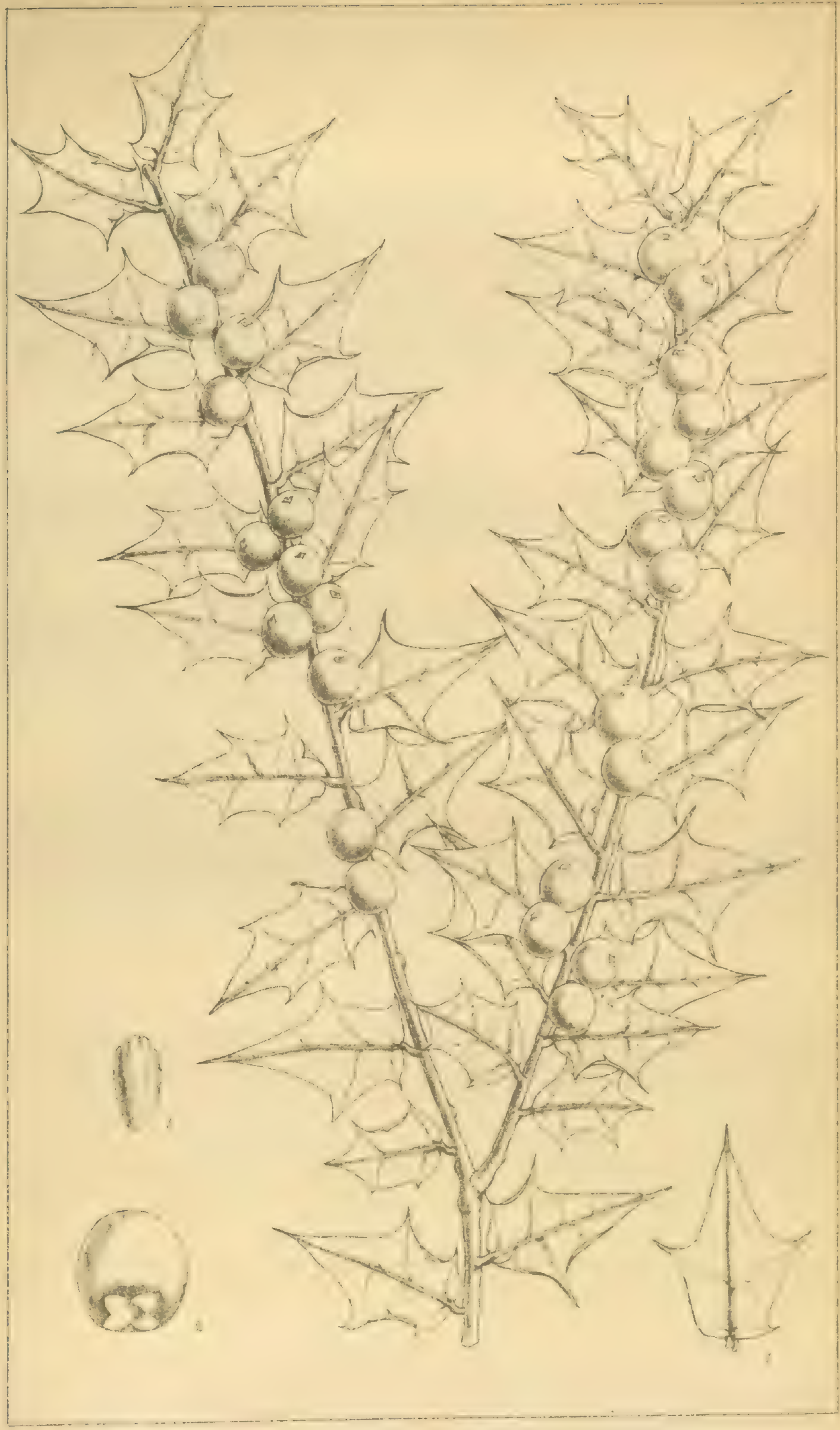
I. Pernyi, *Franchet, Pl. David.* p. 69; ramulis teretibus ultimis brevissime hirtellis, foliis coriaceis lucidis brevissime petiolatis rhomboideo- v. quadrato-ovatis utrinque 1–2-spinoso-dentatis dentibus porrectis rigide spinosis lobo centrali deltoideo-lanceolato spinoso, basi late rotundatis subcordatisve, fructibus globosis geminatis solitariisve subsessilibus pisi magnitudine minutissime scabridis 4-pyrenis, pyrenis dorso nervosis.

Hab. Patung, Central China, *Dr. Henry.* Shensi, *l'abbé David*; Kiuchu, *l'abbé Perny.*

Arbor (fide Dr. Henry) 20–30-pedalis. *Folia* $\frac{3}{4}$–1 poll. longa.

Monsieur Franchet has kindly confirmed the identification of Dr. Henry's specimens with the species described by him, as cited above. Neither of us has seen it in flower. Dr. Henry says the wood is good, and used as timber.—D. Oliver.

Fig. 1. Detached leaf, seen above, the spray figured showing the distichous divaricate leaves on the underside with the fruits attached. 2. Fruit. 3. Pyrene (these latter *enlarged*).



M. S. del. et lith.

Ilex Pernyi, Franch.

Plate 1540.

NEILLIA SINENSIS, *Oliv.*

Rosaceæ. Tribe Spiræeæ.

N. sinensis, *Oliv.* (*sp. nov.*); ramulis teretibus divaricatis ultimis basi perulatis, foliis ovatis acuminatis serratis serrato-lobulatisve interdum utrinque 1–2-lobatis parce pilosulis glabratisve, petiolo stipulis æquilongo, floribus racemosis racemis terminalibus multifloris sæpius simplicibus, pedicellis gracilibus bractea decidua æquilongis, calyce cylindrico ore 5-lobato lobis ovato-lanceolatis subulato-acuminatis, petalis obovatis lobis calycinis paullo longioribus, staminibus circ. 15 petalis brevioribus, carpellis 1 vel 2 ovariis apice pilosulis, ovulis 4–5.

Hab. Patung District, Central China, *Dr. Henry*.

Folia $1\frac{3}{4}$–$2\frac{1}{2}$ poll longa subtus præcipue in venulis parce pilosula; petiolus $\frac{1}{4}$–$\frac{1}{3}$ poll. longus; stipulæ oblongo-lanceolatæ. *Racemi* 1–$2\frac{1}{2}$ poll. longi, bracteati, bracteis lineari-lanceolatis acutis deciduis. *Calyx* tubulosus glabratus, lobis intus hirtellis. *Petala* integra. *Stamina* exteriora filamentis basi complanato-dilatatis apice incurvis. *Ovula* horizontalia vel adscendentia.

Allied to *N. thyrsiflora*, Don, and doubtfully congeneric with *N. opulifolia*, Don. Remarkable in the cylindrical calyx. The carpels, when geminate, are shortly connate at base.—D. Oliver.

Fig. 1. Flower. 2. Upper, 3. Lower stamens. 4 and 5. Dicarpellary and monocarpellary pistil. 6. Ovary, laid open, *Enlarged.*

M.S. del. et lith.

Neillia sinensis, Oliv.

Plate 1541.

DIPTERANTHEMUM CROSSLANDII, *F. v. Muell.*

Amarantaceæ. Tribe Achyranthеæ.

D. Crosslandii, *F. von Mueller in Wing's Southern Science Record*, iii. p. 281; caulibus gracilibus simplicibus v. parce divaricatim ramosis decumbentibus, foliis radicalibus oblanceolatis obtusis crassiusculis glabris, caulinis sparsis oblongo-oblanceolatis in petiolum angustatis, capitulis solitariis terminalibus multifloris, bracteis membranaceis lanceolatis ovatisve parce et molliter pilosis, sepalis 2 exterioribus elongatis anguste lineari-spathulatis apicem versus opalescenti-eburneis inferne armeniaco-coloratis, sepalis interioribus 3 anguste linearibus brevibus.

Hab. Australia, near the Upper Murchison River, towards Mount Hale, *C. Crossland.*

Folia radicalia, cum petiolo $1\frac{1}{2}$–2 poll. longa. *Capitula* $1\frac{1}{2}$–2 poll. longa. *Sepala* exteriora 1–$1\frac{1}{4}$ poll. longa; interiora $\frac{1}{4}$–$\frac{1}{3}$ poll. longa. *Stamina* antherifera 3 v. 2.

A singularly beautiful species, with the habit of *Trichinium Manglesii*, Lindl., but the inflorescence much less elongate and the long sheeny outer perianth-segments, orange or apricot-coloured below, passing into a nacreous white above.

Notwithstanding the extreme disparity in the length of the perianth-segments, upon which Sir F. von Mueller grounds the genus *Dipteranthemum*, I think it might well have been assigned to *Trichinium*.—D. Oliver.

Figs. 1, 2. Bracts. 3. Perianth. 4. One of shorter pilose segments of same. 5. Hair from same. 6. Stamens and pistil. 7. Pistil, the ovary laid open. 8. Longitudinal section of seed. *Enlarged.*

M.S. del. et lith.

Dipteranthemum Crosslandii, F.v M.

Plate 1542.

PSILOTRICHUM AFRICANUM, *Oliv.*

Amarantaceæ, Tribe Achyranthеæ.

P. africanum, *Oliv.* (*sp. nov.*) ; frutex pubescens glabratusve ramulis divaricatis gracilibus subteretibus, foliis oppositis ovato-lanceolatis ovatisve acutis basi late cuneatis rotundatisve minute pubescentibus glabratisve, spicis sæpius 5–15-floris brevibus axillaribus terminalibusque breviter pedunculatis v. subsessilibus, bracteis persistentibus ovato-lanceolatis acutis hirtis patentibus recurvisve, bracteolis late ovatis apiculatis scariosis perianthio dimidio brevioribus, perianthii segmentis ovato-lanceolatis concavis acutis coriaceis extus minute pubescentibus, filamentis angustis basi in annulum brevissimum coalitis, stigmate capitellato.

Hab. Kilimanjaro, 5,000, *Mr. Johnston* ; Zambesi, *Sir J. Kirk* ; Ribè, *Rev. T. Wakefield.*

Folia (in spp. Kilima.) $\frac{3}{4}$–$1\frac{1}{4}$ poll. × $\frac{1}{2}$–$\frac{3}{4}$ poll., (in spp. Zamb. et Ribè) $1\frac{1}{4}$–3 poll. × $\frac{2}{3}$–$1\frac{1}{2}$ poll. ; petiolus 1–3 lin. longus. *Spicæ* $\frac{1}{2}$–$\frac{3}{4}$ poll. longæ ; flores $\frac{1}{8}$–$\frac{1}{6}$ poll. longi.—D. Oliver.

Fig. 1. Flower and bracts. 2. Stamens and pistil. 3. Pistil. 4. Seed and funicle. *Enlarged.*

M.S. del. et lith.

Psilotrichum africanum, Oliv.

Plate 1543.

WAHLENBERGIA ACAULIS, *E. Mey.*

Campanulaceæ, Tribe Campanuleæ.

W. acaulis, *E. Meyer, DC. Prodr.* vii. 430; herba ½–2 poll. acaulescens v. caulibus brevissimis a basi divergentibus, foliis lineari-oblanceolatis acutis dentato-pinnatifidis parce setulosis glabrisve in petiolum angustatis, floribus sessilibus solitariis, calyce setoso-piloso lobis linearibus acutis 1–2 cæteris sæpe longioribus, corolla infundibuliformi calyce multo longiora breviter 5-fida.

Hab. Near Zilverfontein, *Drege*; Garrakoop Poort, Namaqualand, *H. Bolus* (No. 6519).

Radix elongata simplex ad 3–4 poll. longa. *Folia* cum petiolo ½–1½ poll. longa, 1–1½ lin. lata. *Flores* 6–9 lin. longi 'albo-lutescentes.' —D. Oliver.

Until Mr. Bolus rediscovered the plant in Namaqualand, it was known to us solely from Drege's minute specimens.—D. Oliver.

Fig. 1. Leaf. 2. Flower. 3. Calyx. 4. Transverse section of ovary. *Enlarged.*

M.S del. et lith

Wahlenbergia acaulis, E. Mey.

Plate 1544.

ZIZYPHUS AFFINIS, *Hemsl.*

Rhamnaceæ.

Z. affinis, *Hemsl.* (*sp. nov.*); *Z. calophyllæ* valde affinis differt ramulis lenticellis magnis elevatis dense instructis, cymis axillaribus, floribus subglabris fructuque immaturo subglabro.

Hab. Perak, *Mr. L. Wray*, 1885 and 1886.

It would, perhaps, have been better to treat this as a variety of *Z. calophylla*, Wall., with which Kurz (in Journ. As. Soc. Beng. xxxix. 2, p. 73) unites Miquel's *Z. ornata*. The fruit, however, may afford some further distinctive character. In the numerous specimens we have seen of the true *Z. calophylla*, the densely rusty-hairy flowers are borne in terminal cymose corymbs.—W. B. Hemsley.

Fig. 1. Portion of a branchlet. 2. A flower. 3. A petal. 4. A stamen. 5. An ovary: *all enlarged.* 6. A very young fruit: *natural size.*

M S del. et lith.

Zizyphus affinis, Hemsl.

Plate 1545.

GYMNANTHERA NITIDA, *R. Br.*

Asclepiadeæ, Tribe Periploceæ.

G. nitida, *R. Br.*, *Prod. Fl. Nov. Holl.* p. 464; *Benth. Fl. Austral.* iv. p. 326; scandens glabra vel cito glabrescens, foliis coriaceis oblongis subulato-acuminatis subtus pallidioribus reticulato-venosis, cymis axillaribus paucifloris, pedunculis bracteis parvis imbricatis vestitis, floribus glabris breviter pedicellatis, folliculis gracilibus divaricatis.

Hab. North Australia and Queensland, various collectors; British North Borneo, *Dr. M. Fraser* (the specimen figured).

The Bornean specimens agree exactly with the Australian; and *Gymnanthera nitida* is the only Australian Asclepiad having granular pollen-masses. Our plant has entire not deeply bifid coronal scales, as represented in Blume's figure of *Dicerolepis*, a Malayan genus reduced by Bentham to *Gymnanthera*.—W. B. Hemsley.

Fig. 1. A partially expanded flower showing the æstivation. 2. A fully expanded flower. 3. A calyx-lobe and basal glands. 4. Portion of corolla bearing coronal scales and the genitalia within. 5. A stamen. 6. Pollen-masses: *all enlarged.* 7. A seed: *natural size.*

M.C. del.

Gymnanthera nitida, R.Br.

Plate 1546.

PELLACALYX SACCARDIANUS, *Scort.*

Rhizophoreæ, Tribe Legnotideæ.

P. Saccardianus, *Scortechini in Nuovo Giornale Botanico Italiano,* xvii. p. 143 *ex descriptione*; foliis oblongis, usque ad 9 poll. longis, basi rotundatis vel cuneatis apice acuminatis integris supra glabris subtus glabris vel parce puberulis, venis primariis lateralibus utrinque 7–9 subtus elevatis; floribus sæpissime tetrameris, sepalis crassis erectis, petalis in alabastro induplicatis dorso parce puberulis apice emarginatis plus minusve irregulariter denticulatis, ovario sæpe 9-loculare.

Hab. Malacca, *Maingay*, 1563 and 2661; Waterfall Hill, Perak, *Wray*, 701.

P. Saccardianus differs from *P. axillaris* of the 'Flora of British India' in being almost glabrous, in the smaller number of primary lateral veins in the leaves, and in the tetramerous or trimerous flowers. Whether this be the *P. axillaris* of Korth., a Bornean plant, is a little doubtful, for he describes the leaves as '*serrulata, serraturis callosis.*' The leaves of Griffith's Malacca plant are obsoletely crenate-serrate towards the tip; otherwise it agrees very well with Korthals's description. In the Kew Herbarium is a third species of *Pellacalyx* (*P. cristatus*, Hemsl.), Borneo, Beccari, 1258, which may be distinguished as follows: Foliis glabris vel cito glabrescentibus oblongis usque ad 8 poll. longis basi rotundatis, acuminatis distincte crenulatis subtus pallidioribus, venis primariis lateralibus utrinque circiter 8–10; floribus 5–6-meris, petalis appendicibus numerosis filiformibus cristatis.—W. B. Hemsley.

Fig. 1. A flower. 2. A section of the same spread open, showing two of the petals and five of the eight stamens and the numerous ovules in two of the cells. 3. Dorsal view of a petal flattened out. 4. Cross section of a ripe fruit. 6. A seed. 7. Section of the same, showing the embryo with divergent cotyledons: *all enlarged.* 5. A fruit: *natural size.*

M.S. del.

Pellacalyx Saccardianus Scott

Plate 1547.

MICROPORA CURTISII, *Hook. f.*

Laurineæ, Tribe Perseaceæ.

Micropora, *Hook. f.* (*gen. nov.*). *Flores* hermaphroditi. *Perianthii* tubus brevissimus; limbi lobi 6, æquales rotundati. *Stamina* 6, exserta, eglandulosa, filamentis brevissimis; antheræ crassæ, subquadratæ, apice rotundatæ, tomentosæ, 2-locellatæ, locellis poris minutis rotundatis dehiscentibus; staminodia crassa staminibus opposita iis æquilata, late oblongo-rotundata, tomentosa. *Ovarium* glaberrimum ovoideum in stylum brevem attenuatum, stigmate simplici.—Arbor *ramulis petiolis pedunculisque griseo-puberulis.* Folia *petiolata, elliptico-oblonga, acuta, superne profunde reticulata, subtus pallidiora, nervis utrinque ad* 6–8 *arcuatis.* Flores *parvi in racemos paniculasve breves pauciflores dispositi, puberascentes.* — Hexapora, *Hook. f. Fl. British Ind.* v. p. 189, *in nota ad calcem ordinis.*

M. Curtisii, *Hook. f.* (*sp. unica*).

Hab. Penang, close to Chalet, elev. 500 feet, *C. Curtis,* Dec. 1885.

Folia 3–5 poll. longa, 1½–2 lata, juniora membranacea subtus obscure puberuli, matura tenuiter coriacea, superne in sicco pulcherrime impresso-reticulata; petiolo ⅓ poll. longo. *Flores* subglobosi, $\frac{1}{10}$ poll. lati, gracile pedicellati, in paniculas pollicares dispositi, latiores quam longi; staminibus staminodiis ovarioque basi perianthio cinctis.

A very singular genus, quite unlike any other of *Laurineæ*, probably allied to *Syndiclis* (Plate 1515) and *Endiandra.*—J. D. Hooker.

Fig. 1. Diagram of flower. 2. Flower. 3. Perianth-lobe. 4. Stamen. 5. Flower with perianth and stamens removed. 6. Vertical section of flower. *All enlarged.*

M.S. del

Micropora Curtisii, Hkf.

Plate 1548.

EUPHORBIA BURMANICA, *Hook. f.*

Euphorbiaceæ.

E. (Chamæsyce) burmanica, *Hook. f.* (*sp. nov.*); annua, glaberrima, caulibus gracilibus perplurimis prostratis ramosis, foliis oppositis $\frac{1}{6}$–$\frac{1}{4}$ poll. longis petiolatis oblique linearibus subacutis spinuloso-serratis, stipulis laceris, involucris minutis subsolitariis axillaribus campanulatis lobis fimbriatis glandulis limbis suis rotundatis crenatis angustioribus, capsulis minutis glabris, coccis acute carinatis, seminibus acute trigonis obscure undulatis.—E. thymifolia, *Wall. Cat.* 7710 *in part.*

Hab. Burma, on the banks of the Irawaddy, *Wallich.*

Radix tenuis, caulibus 6–10-pollicaribus filiformibus rigidis dichotome ramosis. *Folia* uniformia, coriacea, basi oblique rotundata, marginibus siccitate recurvis. *Involucra* $\frac{1}{20}$-poll. longa, pedicellata, interdum in ramulos axillares subpaniculata, glaberrima, lobi angusti glandularum limbum subæquantes; glandulæ transverse oblongæ. *Styli* breves, 2-fidi, reflexi. *Capsula* $\frac{1}{18}$ poll. diam., ovoideo-globosa, lævis, nutans; pedicello elongato gracili.

A very distinct species, easily recognised by the minute narrow coriaceous sharply serrate leaves. The limb of the gland, though so minute, is larger in proportion than that of its allies.—J. D. Hooker.

Fig. 1. Portion of branch with leaves and flowers. 2. Involucre and flowers. 3. Portion of involucre laid open. 4. Male flower. 5. Female flower. *All enlarged.*

M. S. del

Euphorbia burmanica, Hk.f.

Plate 1549.

ARALIDIUM PINNATIFIDUM, *Miq.*

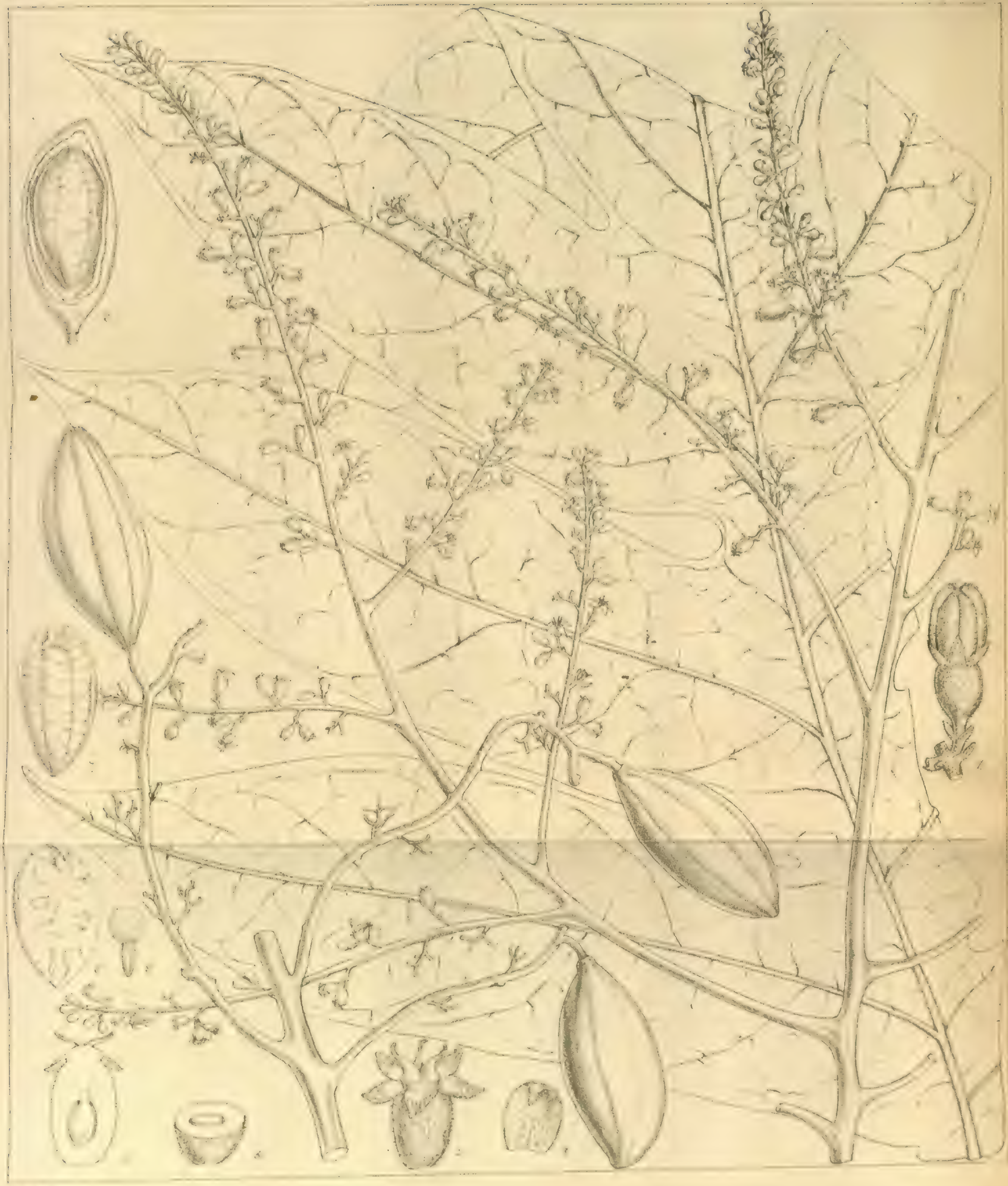
Araliaceæ.

A. pinnatifidum, *Miq. in Fl. Ind. Bot.* vol.i. pt. 1, p. 763, t. 13, *et Suppl.* i. p. 340; *C. B. Clarke in Hook. f. Fl. Brit. Ind.* ii. p. 725; ovario sæpissime 3-loculare, loculis 2 cito evanidis, fructu leviter oblique ovoideo drupaceo 1-spermo, semine pendulo rugoso longitudinaliter sulcato, funiculo (vel placenta) late expanso, albumine grosse ruminato.

Hab. Sumatra, *Junghuhn*; Malacca, *Griffith*, 2702 (Kew distrib.); *Maingay* (676); Perak, *L. Wray*.

Ripe fruit and seed of this singular Araliacea have not previously been figured. The seed is a very remarkable one, owing to its coarsely ruminated albumen and the large expansion of the placenta or funicle, the lobes of which are intruded between the folds of the albumen; and the embryo lies behind and above this expansion, whatever its true nature may be.—W. B. Hemsley.

Fig. 1. A female flower. 2. The same with the petals removed. 3. A petal. 4 and 5. Vertical and cross sections of an advanced ovary after two of the cells are obliterated: *all enlarged.* 6. A fruit, natural size, a portion of the pericarp removed. 7. A seed with the funicular or placental excrescence near the top. 8. Section of a seed: the large cavity near the top on the left was occupied by a portion of the excrescence, and the crevice above it by the embryo.



M. S. del.

Arajidium serpatifolium Mig.

Plate 1550.

SWIETENIA MACROPHYLLA, *G. King.*

MELIACEÆ, Tribe SWIETENIEÆ.

S. macrophylla, *G. King* (*sp. nov.*); foliis amplis ¾-1 ped. longis, foliolis '5- ad 6- (raro 4-) jugis' 4-6 poll. longis, capsula crasse lignosa 6 unc. longa, 3 unc. diam., seminibus longe alatis 3 unc. longis.

HAB. Botanic Garden, Calcutta; in cultivation from seeds stated to have been collected in Honduras.

Arbor (mediocra ?) utrinque glabra, ramulis argillaceis parce lenticellosis. *Folia* alterna modice petiolata, abrupte pinnata, foliolis 5- ad 6- (raro 4-) jugis, 4·5 ad 6 unc. longis, 2 unc. latis, oppositis, superne nitidis, breve petiolulatis, oblique lanceolatis, apice acuminatis, basi (in latere superiore) inæqualibus rotundatis, marginibus integris, leviter (in siccis) incrassatis, nervis secundariis 7- ad 10-jugis suboppositis. *Paniculæ* axillares foliis multo breviores, foliolis fere æquantes, pedunculatæ, breviter ramosæ, bracteolis minutis deciduis, cymulis 1-2-floribus; floribus breviter pedicellatis. *Calyx* cupuliformis breviter 5-dentatus, dentibus rotundatis. *Corolla* imbricata, æstivatione nec contorta; petala 5, concava, obovata, integra. *Tubus staminifer* cylindricus, petalis brevior, apice denticulatus, intus paulo infra apicem antheriferus; antheris 10, parvis sessilibus adnatis. *Discus* cupuliformis carnosus coccineus leviter multo-dentatus, basin ovarii cingens. *Ovarium* cylindrico-conoideum, 5-loculare, ovulis loculis in singulis circiter 12; stylus cylindricus; stigma discoideo-peltatum, 5-sulcatum. *Capsula* ovata acuminata lignosa rufo-fusca, minute tuberculata, 6 unc. longa, 3 unc. in diam.; semina superne longe alata, 3 unc. longa.

The young branchlets as thick as the little finger; leaves about 15 inches long, leaflets shining on both surfaces, paler beneath; panicles very much shorter than the leaves (only about as long as the leaflets); capsule as in *S. Mahagoni*, L., but considerably larger, more minutely tuberculate, and with thicker endocarp, always 5-celled.

It is difficult to find good technical characters to separate this from *S. Mahagoni*, Linn. But as they grow, the two trees are very unlike. This plant has leaves twice as long as those of *S. Mahagoni*, and the leaflets, which are even larger in proportion than the leaves, are in five or six pairs, and not in four pairs as in *S. Mahagoni*. The capsules of this are larger, as are also the seeds. This flowers a month earlier

(at Calcutta) than the true Mahogany, and it seeds freely, whereas the true Mahogany rarely seeds there at all.

The seeds of this tree were received from the India Office in the year 1872, and were said to have been collected in Honduras. As soon as the seedlings were a few inches high, it was seen that they were different from those of true Mahogany, the appearance of which is sufficiently well known in this garden. The seedlings grew much more rapidly than those of true Mahogany, and were planted out under the provisional name of *Swietenia species*. In their twelfth year many of the plants had attained a height of twenty feet (thus growing three times as fast as *S. Mahagoni* does in this garden), and had begun to yield flowers freely. Last year many of them yielded capsules containing good sound seed; in this respect presenting again a notable contrast to the true Mahogany, which does not seed until thirty or forty years of age, and which at all times seeds very sparingly. The bark of this tree is different from that of true Mahogany, and Mr. Gamble informs me that the wood is also different.

I claim specific rank for this with some hesitation, the chief distinctions from the true Mahogany (besides the physiological) lying chiefly in size of leaves and capsules. But if these are not considered sufficient to constitute this a separable species, they seem certainly sufficient to separate it off as a very well marked variety of *S. Mahagoni*, L.—G. King.

Fig. 1. Bud. 2. Flower. 3. Staminal tube laid open. 4. Anther. 5. Pistil and hypogynous disk. 6. Same, longitudinal section. 7. Section of capsule. 8. Seed. *Excepting 7 and 8 enlarged.*

M.J.del

Swietenia macrophylla, King.

Plate 1551.

ANISOPHYLLEA GAUDICHAUDIANA, *Baill.*

Rhizophoraceæ. Tribe Anisophylleæ.

A. Gaudichaudiana, *Baillon, Adans.* xi. 311; foliis isomorphis amplis ovali-ellipticis obtusiuscule acuminatis basi subæqualiter rotundatis v. leviter angustatis integris quintuplinerviis glabris coriaceis sicco facie superiore lutescentibus, petiolis crassis anguste canaliculatis basi articulatis, floribus parvis monoicis sessilibus v. brevissime pedicellatis, glomeratis in spicis ramosis fulvo-puberulis axillaribus dispositis; fl. masculis numerosis, calyce 4-fido lobis ovato-deltoideis, petalis minutis, pistillo rudimentario; fl. femineis paucis sessilibus crassiusculis, stylis 4 recurvis, fructibus magnis pyriformibus v. ellipsoideis interdum apice umbonatis, pericarpio crasse lignoso cinnamomeo-tomentello, monospermis. *A. grandifolia*, G. Henslow in Hook. fil. *Fl. Brit. Ind.* ii. 442; *Cocculus flavicans*, Wall. Cat. 4976.

Hab. Penang, *Gaudichaud, Maingay, Curtis.*

Arbor 50-pedalis (*Maingay*), ramulis teretibus opacis. *Folia* 6–10 poll. longa, 2–4 poll. lata; petiolus $\frac{1}{3}$ poll. longus. *Fructus* $3\frac{1}{2}$–4 poll. longus.

The structure of the seed is not clearly recognisable in Mr. Curtis's dried specimens. It is, however, described by M. Baillon from M. Gaudichaud's notes. The radicle is thick and macropodous, the plumule consisting of 8 leaflets in two series of 4.—D. Oliver.

Fig. 1. Glomerules of ♂ and one ♀ flower. 2. Male flower. 3. Same, perianth removed. 4. Stamens. 5. Female flower. 6. Same, perianth-lobes removed. 7. Same, in longitudinal section. 8. Fruit. *Enlarged.*

M.S. del.

Anisophyllea Gaudichaudiana, Baill.

Plate 1552.

LEBECKIA LONGIPES, *Bolus*.

Leguminosæ. Sub-tribe Crotalarieæ.

Lebeckia longipes, *Bolus* (*sp. nov.*); tota glabra; caulibus pluribus (verisimiliter annuis e radice perenne) procumbentibus late diffusis gracilibus filiformibus simplicibus vel basi ramosis, foliis unifoliolatis filiformibus inarticulatis subsecundis, racemis terminalibus laxe 4–6-floris, floribus minoribus, calycis lobis subulatis tubo turbinato subæquilongis; carina valde incurva; legumine oblongo compresso, utrinque acutato, stipitato, 4–8-spermo, stipite longo setiformi rigido squarroso-patenti.

Hab. In planitie ericetali prope pagum Ceres, in Regione Austro-Occident. Coloniæ Capensis, alt. 1500 ped., fl. Dec., *H. Bolus* (No. 5492).

Caules 1–2 ped. longi. *Folia* 2·5–4·0 centim. longa; racemi spithamæi. *Flores* vix 1 cm. longi; stipes 3·5–4·0 cm. longus. *Legumen* maturum 1·8 cm. longum.

This belongs to Harvey's section *Phyllodiastrum*, and is well distinguished by its small legumes borne at the ends of long and fine, yet rigid, foot-stalks. It was abundant where found.—H. Bolus.

Fig. 1. Leaf. 2. Calyx and staminal sheath. 3. Vexillum. 4. Ala. 5. Carina. 6. Stipitate ovary. 7. Legume.

The description of an allied species with which we are favoured by Mr. Bolus is subjoined. A third species, also sent us by Mr. Bolus, will appear in a later number of 'Icones Plantarum.'

Lebeckia Wrightii, *Bolus*; glabrescens, in partibus junioribus calyceque tenuiter adpresse sericea; caulibus e radice perenne pluribus subherbaceis procumbentibus gracilibus simplicibus vel laxe ramosis, stipulis geminis, subulatis, minimis 2–3 millim. longis interdum deficientibus, foliis (ad phyllodia reductis) alternis linearibus compressis acutis patentibus sub-secundis 3–7 centim. longis, floribus terminalibus nunc solitariis in pedunculis 2·5–3·0 cm. longis, nunc in racemis laxis bifloris dispositis; pedicellis 4 millim. longis basi bibracteolatis, calyce turbinato 6 mm. longo laciniis subæqualibus, duabus posticis lanceolatis, ceteris subulatis, tubo subæquilongis; petalis calycem vix superantibus vexillo, ovato emarginato concavo; alis acutis carina obtusa longioribus; ovario 6–12-ovulato; legumine

oblongo compresso acuto substipato, 6–12-sperino sericeo demum glabrescente, 2–2·5 cm. longo 6 mm. lato. (Ex. exempll. viv. plur. No. 4671).—*Lotononis Wrightii Harv.* ? *Flor. Cap.* ii. 594.

Hab. In ericetis in clivis orientalibus Montis Tabularis prope Wynberg, Peninsulæ Capensis, alt. circa 350 metr., mense Nov., legi. No. 4671 in herbb. propr., Kewensi, &c.

The affinities of this plant are with *L. longipes* mihi, *L. Candolleana Walp.*, and *L. Meyeriana, E.* and *Z.*, all belonging to Harvey's section *Phyllodiastrum.* In most of these the leaves are simple, filiform, and sometimes jointed in the middle. After I had proposed to describe the plant as new, Mr. N. E. Brown of Kew kindly drew my attention to the description of *Lotononis Wrightii, Harv. Flor. Cap.* ii. 591, of which there were no examples in the Kew Herbarium, and expressed his suspicion that my plant was the same. I think he is right, for the description agrees in all essentials, only that my specimens appear to be better grown, and the flowers, living and dead, are certainly yellow, whereas Harvey quotes from Wright, the collector, 'deep dark purple;' nor does Harvey mention the tendency of the legume to become stipitate, which, with the phyllodia, affords so strong an indication of connection with *Lebeckia.* The only opposing circumstance is the presence of stipules (which are often wanting), and this taken alone would certainly not warrant us in keeping the species out of *Lebeckia.* Harvey admits that his '*Lotononis*' is 'very distinct from any other species. The habit is that of a *Hallia.*' But it has not the calyx of a *Lotononis*, and the leaves would be quite unique in that genus; while, as I have stated above, in habit, leaves, calyx, corolla, and legume, it has close allies in *Lebeckia.*—On account of the strong probability of the identity of this plant with Harvey's I adopt this specific name.—The species seems to be a rare one; I have only gathered it once.—*H. Bolus.*

M.S.del.

Lebeckia longipes, Bolus.

Plate 1553.

UNONA WRAYI, *Hemsl.*

Anonaceæ. Tribe Unoneæ.

U. (§ **Desmos-Truncifloræ**) **Wrayi**, *Hemsl.* (*sp. nov.*); foliis oblongis vix coriaceis, floribus caulinis graciliter pedunculatis, petalis subæqualibus angustis extus glabris, ovariis hirsutis pauci-ovulatis.

Hab. Perak, *L. Wray.*

Arbor ramulis ultimis ferrugineo-pubescentibus. *Folia* breviter petiolata, subcoriacea, subtus præsertim secus costam elevatam pubescentia, oblonga, utrinque obtusa, 4–6 poll. longa, medio 2–2½ poll. lata, subtus venis lateralibus primariis paucis distantibus arcuatim anastomosantibus prominulis; petiolus crassus, cylindricus, dense pubescens, 1½–2 lineas longus. *Flores* albi, demum sanguinei, trunco orti (*Wray*), fasciculati vel subsolitarii, pedunculati. *Sepala* 3, ovato-lanceolata, vix acuta, 3–5-lineas longa. *Petala* sæpissime 6, subæqualia, subcarnosa, extus sparse puberula, lineari-lanceolata, acutissima, circiter 3 poll. longa, maxime 4 lineas lata. *Stamina* numerosissima. *Ovaria* numerosa, hirsuta, circiter 4-ovulata. *Carpella* fructifera rubra (*Wray*) subcarnosa, ovoidea vel oblonga, 1–1¼ poll. longa, stipitata glabra.—W. B. Hemsley.

Fig. 1. A flower from which the petals have been removed. 2 and 3, front and back views of a stamen. 5. A pistil. 6. A section of the same. 7. Section of a ripe carpel. All the figures, except the last, *enlarged*.

M.S.del.

Unona Wrayi, Hemsl.

Plate 1554.

COTYLEDON VISCIDA, *S. Wats.*

Crassulaceæ.

C. viscida, *S. Watson* in *Proc. Am. Acad.* xvii. 372; acaulis v. breviter caulescens; foliis numerosis fasciculatis linearibus basin versus plus minus dilatatis leviter complanatis v. apice acutiusculo subtrigono junioribus viscidulis, ramorum florif. sparsis brevibus teretiusculis, floribus carneis pedicellatis in cymis paniculatis dispositis, lobis calycinis ovatis basi coalitis, petalis lanceolatis infra medium connatis calyce triplo longioribus.

Hab. Rocks near the hot springs at San Juan Capistrano, Los Angeles County, California, *Nevin* (S. Watson, *l.c.*)

Our figure is from a specimen which flowered at Kew, July 1886.

Caulis florifer pedalis teres, basi decumbens. *Folia* radicalia 4–6 poll. longa, primum plus minus viscidula; caulina florif. $\frac{1}{2}$–$\frac{3}{4}$ poll. longa. *Flores* $\frac{1}{2}$–$\frac{2}{3}$ poll. diam.; pedicellus 1–3 lin. longus.—D. Oliver.

Fig. 1. Transverse section of leaf. 2. Calyx and carpels. 3. Stamens and coherent petals. 4. Anther. 5. Carpels and basal glands. *Enlarged.*

1.

2.

M.S.del

Cotyledon viscida, Wats.

Plate 1555.

CYRTANDROMŒA MEGAPHYLLA, *Hemsl.*

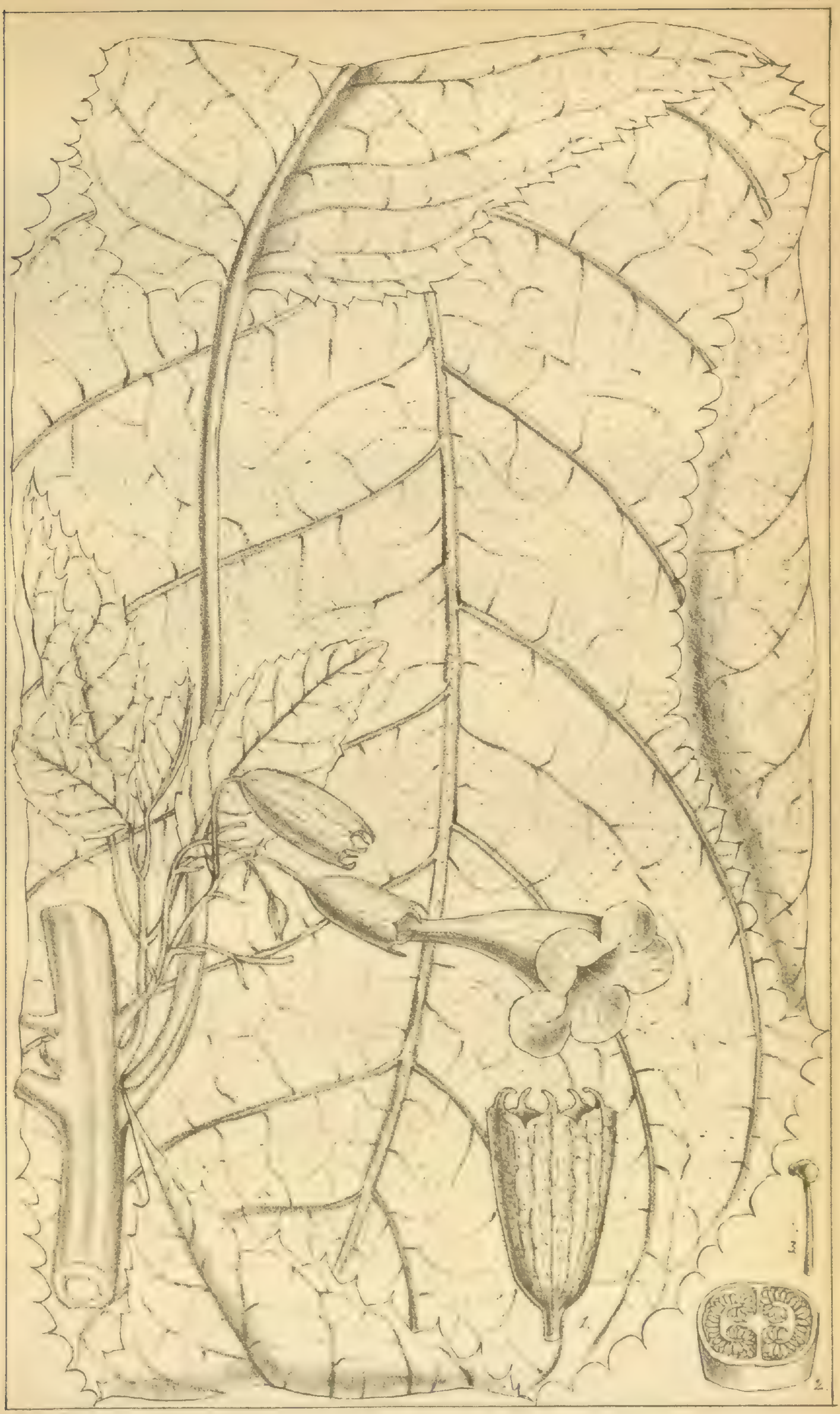
Gesneraceæ. Sub-tribe Didymocarpeæ.

C. megaphylla, *Hemsl.* (*sp. nov.*); foliis oppositis subæqualibus amplis longissime petiolatis, cymis supra-axillaribus laxe plurifloris, calycis dentibus apiculatis.

Hab. Perak, Waterfall Hill, at 2100 feet, *L. Wray.*

Herba erecta, tripedalis (*Wray*) præter flores undique parce puberula, caulibus crassiusculis tetragonis. *Folia* papyracea, ovata, absque petiolo usque ad 10 poll. longa, acute acuminata, basi rotundata vel subcordata, grosse serrato-dentata; petiolus teres, 3–5 poll. longus. *Flores* albi (*Wray*) circiter 2 poll. longi. *Calyx* regularis, breviter 5-dentatus, fructifer inflatus auctus. *Corolla* leviter oblique infundibuliformis, limbo fere æqualiter 5-lobato. *Ovarium* perfecte 2-loculare.—W. B. Hemsley.

Fig. 1. Calyx. 2. A cross section of the ovary. 3. Part of style with stigma. *Enlarged.*



M.S del.

Cyrtandromæa megaphylla, Hemsl.

Plate 1556.

ARGOSTEMMA INVOLUCRATUM, *Hemsl.*

Rubiaceæ. Tribe Hedyotideæ.

A. involucratum, *Hemsl.* (*sp. nov.*) ; foliis valde inæqualibus subtus glabris, floribus 1–3-aggregatis involucratis, corollæ segmentis extus laxe adpresse pilosis.

Hab. Maxwell's Hill, Perak, *L. Wray.*

Herba humilis, caulibus gracilibus basi radicantibus primum pilosis. *Folia* tenuia, majora breviter petiolata, oblanceolata, 1–1½ poll. longa, subacuta, supra parce præcipue secus costam strigosa ; venis primariis lateralibus utrinque circiter 8 haud prominentibus ; stipulæ foliaceæ foliis minoribus similes. *Flores* albi (*Wray*), pedunculis terminalibus 1–3-floris pilosis, bracteis membranaceis (ut videtur albis) verticillatis glabratis instructis. *Corolla* 5-partita, segmentis acuminatis extus glabris sepalis paulo longioribus. *Antheræ* elongatæ, arcte conniventes.—W. B. Hemsley.

Fig. 1. A flower : *twice natural size.* 2. A segment of the corolla seen from the outside. 3. The stamens : *still more enlarged.*

M.S.del,

Argostemma involucratum, Hemsl.

Plate 1557.

CHLOROCYATHUS MONTEIROÆ, *Oliv.*

Asclepiadeæ. Tribe Periplocæ.

Chlorocyathus, *Oliv.* (*gen. nov.*). *Calyx* brevis 5-partitus, segmentis ovato-lanceolatis, intus basi glandulis parvis carnosulis subulatis alternantibus. *Corolla* rotata limbo patente tubo subduplo longiore, lobis ovato-oblongis -lanceolatisve æstivatione dextrorsum obtegentibus marginibus inferne recurvis. *Corona* corollæ tubo adnata, dentibus 5 corollæ lobis alternis anguste lineari-subulatis facie longitudinaliter canaliculatis incurvis basi inter dentes breves carnosos incurvos emergentibus. *Stamina* intra coronam affixa, filamentis distinctis: antheræ lanceolatæ apicibus acuminatis conniventibus cohærentes. *Pollen* granulosum, corpusculorum appendicibus dilatatis ovatis indivisis applicitum. *Stigma* vertice obtusum carnosum. *Folliculi* . . . . Herba *caudice tuberoso, caule elongato volubili.* Folia *opposita petiolata oblanceolato- vel obovato-oblonga pubescentia.* Cymæ *paucifloræ in una axilla breviter pedunculatæ; bracteæ minutæ ovatæ scariosæ.*

C. Monteiroæ, *Oliv.* (*sp. unica*).

Hab. Delagoa Bay, *Mrs. Monteiro* (the plate and description from a specimen flowered at Kew, July 1886).

Caulis gracilis pubescens. *Folia* (juv.) $1\frac{1}{2}$–$2\frac{1}{2}$ poll. longa; petiolus $\frac{1}{6}$–$\frac{1}{4}$ poll. longus. *Cymæ* vel ramulos foliaceos breves terminantes vel pedunculis brevibus aphyllis; flores $\frac{3}{4}$–1 poll. diam. virescentes.

Another of the several plants from Delagoa Bay of great botanical interest for which we are indebted to Mrs. Monteiro. A *Periploca* from the same region, and gathered by the same lady, referable to the imperfectly known genus *Curroria*, we shall figure in an early number of 'Icones Plantarum.'—D. Oliver.

Fig. 1. Floral diagram. 2. Flower, the segments of the corolla-limb removed. 3. Calyx-lobe from within, showing lateral glands. 4. Portion of corona, lining corolla-tube from within. 5. Anthers connivent over stigma. 6. Corpuscle with polliniferous disk. 7. Longitudinal section of pistil (the insertion of filaments on corona omitted). *Enlarged.*

M.S.del.

Chlorocyathus Monteiroæ, Oliv.

Plate 1558.

SMYTHEA MACROCARPA, *Hemsl.*

Rhamnaceæ. Tribe Ventilagineæ.

S. macrocarpa, *Hemsl.* (*sp. nov.*); undique fere glabra vel glabrescens, foliis crenulatis acuminatis, petalis latis truncatis, fructu ovato-oblongo fere tripollicari.

Hab. Perak; Waterfall Hill, Larut, L. Wray.

Frutex scandens vel vagans (*Wray*) ramulis flexuosis primum puberulis. *Folia* disticha, breviter petiolata, subcoriacea, glaberrima, ovato-lanceolata vel oblongo-lanceolata, usque ad 7 poll. longa, acute acuminata, basi plus minusve inæqualia, serrulata, venis primariis lateralibus utrinque circiter 10 supra impressis subtus elevatis, venis ultimis minutissime reticulatis. *Flores* in axillis foliorum fasciculati, pedicellati, ferrugineo-puberuli. *Sepala* lata, crassiuscula. *Petala* parva, latiora quam longa, truncata, breviter unguiculata, a latere involuta antheras vestientia. *Ovarium* glabrum 2-loculare. *Fructus* abortu sæpissime (an semper?) 1-spermus; semina matura non visa.

This species differs from *S. pacifica*, Seem., in the size and shape of its petals and seed-vessel, and from *S. calpicarpa*, Kurz, in foliage and its large glabrous fruit.—W. B. Hemsley.

Fig. 1. Portion of leaf showing the dense reticulation of the veins. 2. A flower-bud. 3. An expanded flower. 4. A petal. 5. Stamens. 6. Vertical section of ovary. 7. A fruit. 8. Immature seed and portion of pericarp. *All enlarged*, except 7 and 8.

M. S. del.

Smythea macrocarpa, Hemsl.

Plate 1559.

CLERODENDRON CEPHALANTHUM, *Oliv.*

Verbenaceæ. Tribe Viticeæ.

C. cephalanthum, *Oliv.* (*sp. nov.*) ; affinis C. capitato (*Sch. et Thonn.*), ramulis tetragonis ultimis setuloso-hirtis mox glabratis, foliis suboppositis alternisve petiolatis tenuiter coriaceis late ellipticis v. obovato-ellipticis obtusis apiculatis v. breviter obtuse acuminatis basi rotundatis late cuneatisve, supra glabris subtus in costa valida setuloso-hirtellis glabratisve reticulatis venis subtus conspicuis, inflorescentia terminali globoso-capitata sæpius breviter pedunculata multiflora, bracteis papyraceis reticulatis ellipticis calycibus multo brevioribus, calyce 5-fido tubo basi obtuso leviter angustato, lobis ovato-lanceolatis adscendentibus sicco obscure nervosis, corolla elongata tubo gracili glabro apice curvato, limbi lobis oblongo-oblanceolatis tubo multoties brevioribus.

Hab. Zanzibar Island, *Sir John Kirk.*

Folia 3–5 poll. longa, $1\frac{1}{2}$–$2\frac{1}{4}$ poll. lata; petiolus $\frac{1}{3}$–1 poll. longus, hirtellus mox glabratus. *Flores* 3 poll. longi; calyx 6–7 lin. longus.

Nearly allied to *C. capitatum*, Sch. and Thonn., of which, indeed, on more careful comparison, I think it would have been more prudent to regard it as a variety. The hairiness is variable, both of foliage and inflorescence, in *C. capitatum*, but in one large series of specimens of this plant from both E. and W. Tropical Africa I do not find the glabrous, all but evenose, calyx of the plant figured.—D. Oliver.

Fig. 1. Specimen showing leaves and inflorescence. 2. Detached flower. 3. Style. *Natural size.*

J.Allen del

Clerodendron cephalanthum, Oliv.

Plate 1560.

MEZZETTIA HERVEYANA, *Oliv.*

Anonaceæ.

M. Herveyana, *Oliv.* (*sp. nov.*); ramulis teretibus nodosis glabris, foliis petiolatis oblongo-ellipticis breviter acuminatis basi rotundato-cuneatis glabris supra nitentibus, floribus pedicellatis 2–4-fasciculatis, fasciculis axillaribus sessilibus pedicellis floribusque fulvo-puberulis, sepalis basi coalitis ovatis obtusis, petalis exterioribus ovato-lanceolatis obtusis planis, interioribus minoribus late ellipticis obtuse apiculatis incurvis, antheris sessilibus obovato-quadratis circ. 12, carpello glabro, ovatis geminatis superpositis.

Hab. Malacca, *D. F. A. Hervey, Esq.*

Folia $2\frac{1}{2}$–3 poll. longa, 1–$1\frac{1}{4}$ poll. lata; petiolus $\frac{1}{4}$–$\frac{1}{3}$ poll. *Pedicelli* $\frac{1}{4}$–$\frac{1}{2}$ poll. longi.

To this genus may also be referred *Lonchomera leptopoda*, Hk. f. and T., 'Fl. Brit. India,' i. 94; a species with much narrower petals. The other species known to us are Bornean, and described by Signor Beccari in 'Giorn. Bot. Ital.' iii. (1871), pp. 187–8.—D. Oliver.

Fig. 1. Flowering branch. 2. Detached flower: *natural size.* 3. Flowers from above, petals removed. 4. Carpel, longitudinal section. 5 and 6. Anther, front and back. *Enlarged.*

A.Ker. del

Mezzettia Herveyana, Oliv.

Plate 1561.

PHÆANTHUS LUCIDUS, *Oliv.*

Anonaceæ. Tribe Mitrephoreæ.

P. lucidus, *Oliv.* (*sp. nov.*) ; arbor parva, ramulis novellis ferrugineo-pubescentibus mox glabratis, foliis oblongo-ellipticis v. late ovalibus acuminatis basi cuneatis v. leviter rotundatis nitentibus, costa nervisque lateralibus subtus prominentibus exceptis glabris, pedunculis extra-axillaribus sæpius unifloris, sepalis parvis ovatis acutis, petalis exterioribus calycem paulo superantibus ovatis acutis, interioribus majoribus ($\frac{1}{2}$-poll.) oblongo-ovatis coriaceis apicem versus crassiusculis subtrigonis extus parce pubescentibus, carpellis circ. 15, ovariis pilosulis, stigmate oblongo carnoso glabro ovario subæquilongo.

Hab. Penang, at 500 ft., *C. Curtis.*

Folia 5–7 poll. longa, $1\frac{1}{4}$-$2\frac{1}{4}$ poll. lata, submembranacea ; nervis lateralibus utrinque 8–9 ; petiolus $\frac{1}{4}$ poll. longus. *Flores* $\frac{1}{2}$ poll. longi, pedunculus $\frac{1}{2}$–1 poll. longus. *Petala* interiora 5–6 lin. longa. *Antheræ* subquadratæ subsessiles v. interiores cum filamento brevissimo sæpius complanato.

This species is nearer to Signor Beccari's Bornean *P. crassipetala* than to the only Malacca *Phœanthus* in the 'Flora of British India.'—D. Oliver.

Fig. 1. Flowering branch. 2. Detached flower : *natural size.* 3. Carpel. 4. Same, the ovary laid open. 5 and 6. Anther, front and back. *Enlarged.*

Phæanthus lucidus, Oliv

Plate 1562.

MITREPHORA MACROPHYLLA, *Oliv.*

Anonaceæ. Tribe Mitrephoreæ.

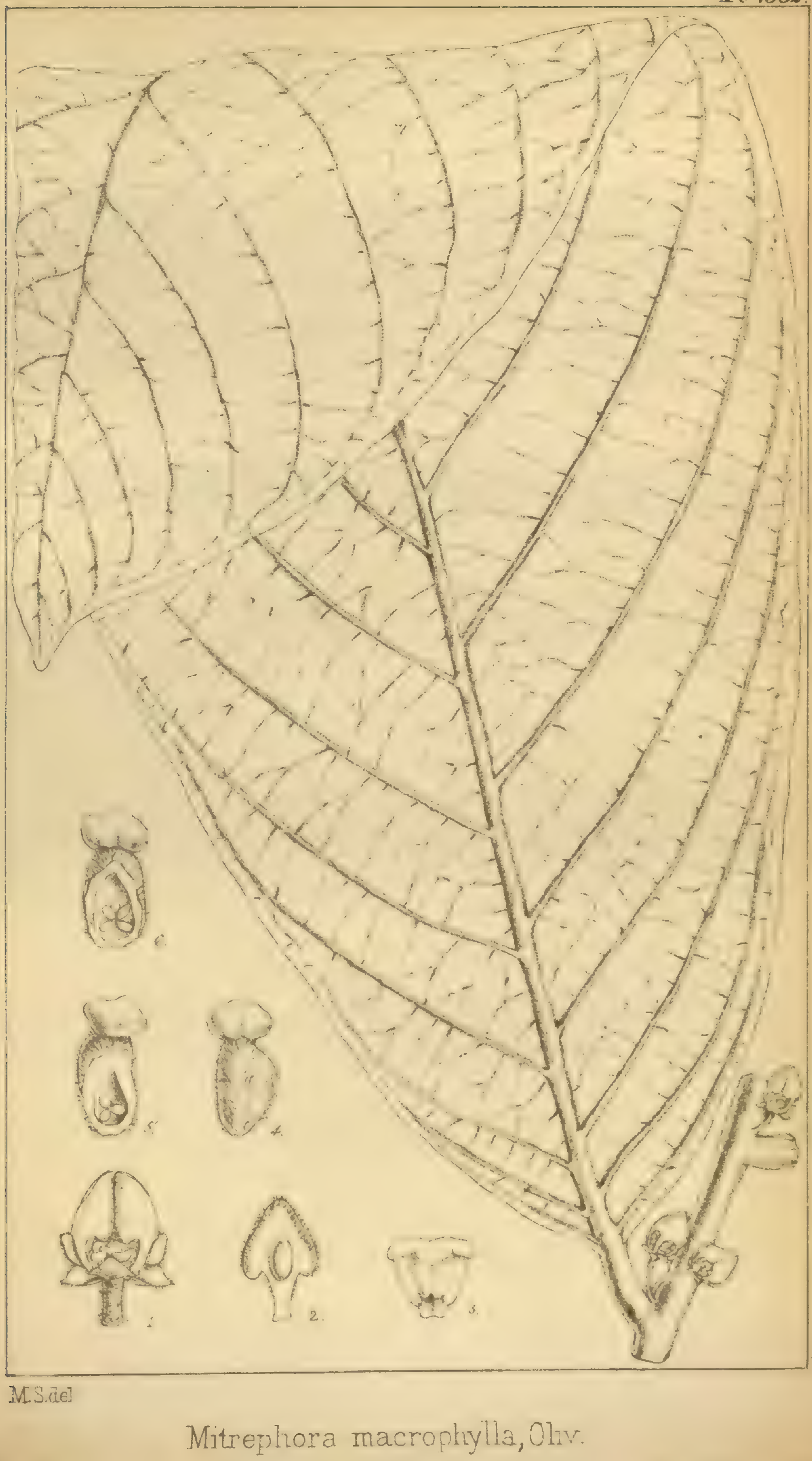
M. macrophylla, *Oliv.* (*sp. nov.*); ramulis teretibus tomentellis, foliis amplis obovato-ellipticis obtusis breviter apiculatis basi rotundatis supra, costa hirtella excepta, glabratis subtus reticulatis plus minus hirtellis, nervis lateralibus utrinque 17–22, floribus parvis breviter pedicellatis solitariis binisve axillaribus, sepalis late ovatis hirtis, petalis exterioribus ovatis calycem paulo superantibus, interioribus unguiculatis lamina intus callo carnoso elliptico instructa, carpellis circ. 12–15, ovariis hirtellis, stigmate capitato apice depresso, carpellis fructiferis globosis tomentellis brevissime stipitatis.

Hab. Penang, *Dr. Maingay*; (alt. 1000 ft.), *C. Curtis*.

Arbor. *Folia* 9–14 poll. longa, $3\frac{1}{2}$–5 poll. lata; petiolus crassus tomentellus $\frac{1}{4}$–$\frac{1}{3}$ poll. longus. *Flores* $\frac{1}{4}$–$\frac{1}{3}$ poll. diam., breviter pedicellati.

Dr. Maingay's specimens are in fruit only, so that the genus was not determinable previously.—D. Oliver.

Fig. 1. Detached flower. 2. Inner petal seen from within, showing callus. 3. Stamen. 4. Carpel. 5 and 6. Ovary laid open. *Enlarged*.



M.S.del

Mitrephora macrophylla, Oliv.

Plate 1563.

XYLOPIA STENOPETALA, *Oliv.*

Anonaceæ. Tribe Xylopieæ.

X. stenopetala, *Oliv.* (*sp. nov.*); ramulis gracilibus glabrescentibus minute et copiose lenticellatis, foliis oblongo-ellipticis obtusiuscule acuminatis basi breviter rotundatis tenuiter coriaceis reticulatis supra glabris subtus glaucescentibus obsolete et minute sericeo-pubescentibus mox glabratis petiolatis, floribus axillaribus solitariis v. 2–3-fasciculatis gracile pedicellatis, sepalis ovatis infra medium coalitis, petalis exterioribus e basi ovata elongato-ligulatis, interioribus brevioribus angustissimis, antheris linearibus connectivo apice producto, ovariis in toro depresso insertis pilosulis in stylo elongato angustatis, carpellis fructiferis stipitatis 1–4-spermis subteretibus pericarpio carnosulo.

Hab. Penang, Government Hill, 600 ft., *C. Curtis.*

Arbor 50–60-ped. *Folia* $2\frac{1}{2}$–4 poll. longa, $\frac{3}{4}$–$1\frac{1}{2}$ poll. lata; petiolus puberulus glabratusve $\frac{1}{6}$ poll. longus. *Pedicelli* apice sæpe decurvi 5–7 lin. longi. *Petala* exteriora $1\frac{1}{4}$–$1\frac{1}{2}$ poll. longa; interiora 10–12 lin. longa. *Carpella* fructifera crasse stipitata ad 2–$2\frac{1}{2}$ poll. longa, 5–6 lin. diam.

Allied to *X. oxyantha*, Hk. f. and T.—D. Oliver.

Fig. 1. Flower, extremities of the petals cut off. 2. Same, petals and stamens removed. 3. Stamen. 4. Carpel. 5. Same, ovary in longitudinal section. *Enlarged.*

M.S del

Xylopia stenopetala, Oliv.

Plate 1564.

CHEILOTHECA MALAYANA, *Scort.*

Monotropeæ.

C. malayana, *Scortechini MS.*; squamis ovato-oblongis obtusis, petalis apice rotundatis cucullatis intus villosis, antheris brevibus hippocrepiformibus.

Hab. Malayan Peninsula, at Larut in Perak, *Father Scortechini.*

Planta 6–9-pollicaris, crassiuscula, erecta, simplex v. caule bis terve diviso. *Squamæ* $\frac{1}{4}$–$\frac{3}{4}$ poll. longæ, imbricatæ, superiores sensim majores, glaberrimæ, luride purpureæ. *Flores* pollicares, terminales, solitarii, squamis supremis velati, apicibus petalorum exsertis, albi. *Sepala* squamis supremis consimilia, lineari-oblonga, obtusa, concava, glaberrima. *Petala* sepalis longiora latiora et magis concava, intus pilosa, vertice rotundata cucullata. *Stamina* disco sinnato hypogyno inserta, filamentis linearibus crassiusculis pilosis, alternis paullo brevioribus; antheræ breves, innatæ, loculis superne confluentibus rimis marginalibus. *Ovarium* anguste fusiforme, stigmate pulviniforme obscure 4-lobo, placentis 6 parietalibus. *Bacca* $\frac{3}{4}$ poll. diam., carnosa, alba, stylo persistente truncato terminata.

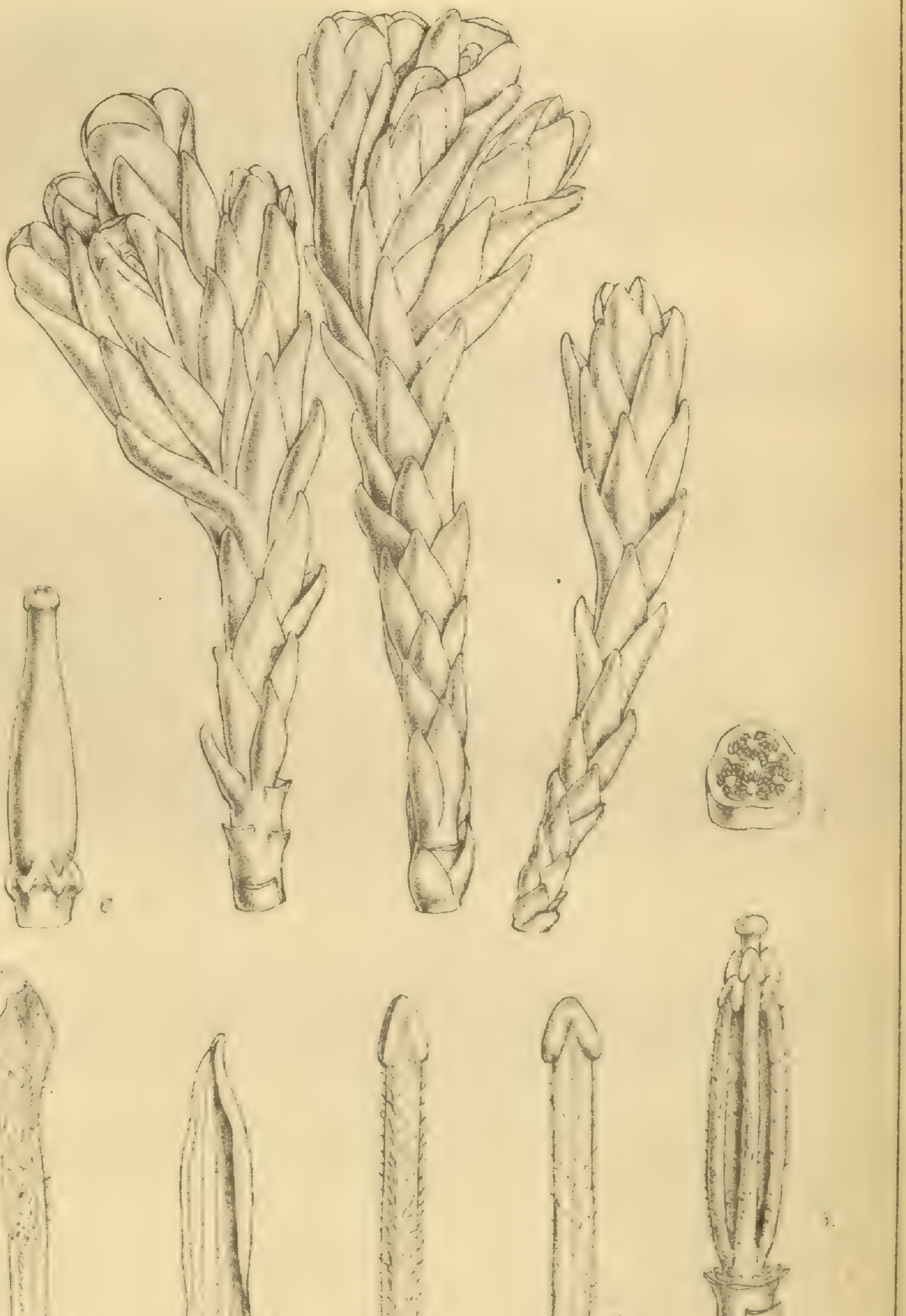
This is a second species of a genus which I discovered in the Khasia Mts. in 1850, and published in the 'Genera Plantarum' under the name of *Cheilotheca*; it differs from the type of the genus in the very short hippocrepiform anthers which in *C. khasiana* are very long, like linear lips on each side of the connective. The examination of specimens of Father Scortechini's plant preserved in spirits reveals a distinct but low hypogynous disk, which was not observable in the dried specimens of the Khasian plant. In other respects the two species are closely allied.

C. malayana was discovered by the late Father B. Scortechini, who, after devoting two years indefatigably to the exploration of the Flora of Perak, has within the last few months fallen a victim to its climate. His large collections are, however, fortunately secured for the Herbaria of the Royal Gardens of Calcutta and Kew.

Father Scortechini sent a drawing of this *Cheilotheca* with notes in March of last year, and specimens in spirits in August, without fruit, however, and the above description has been drawn up from all the above materials. Mr. C. B. Clarke, who has lately returned from India, and has resumed his labours on Indian plants at Kew, informs me that he has discovered the fruit of *C. khasiana* in the hills whence its name is derived, and that it is a subglobose berry. It will, I hope, shortly be figured in this work.—J. D. Hooker.

Fig. 1. Sepal. 2. Petal. 3. Flower with perianth removed. 4 and 5. Stamens 6. Ovary and disk. 7. Transverse section of ovary. *All enlarged.*

Pl 1564



M. S. del.

Cheilotheca malayana, Scort

Plate 1565.

VITIS HUMILIS, *N. E. Br.*

Ampelideæ.

V. humilis, *N. E. Brown* (*sp. nov.*); caulibus decumbentibus flexuosis subtriangularibus parce glanduloso-hispidis, foliis approximatis simplicibus carnosulis (sicco coriaceis) breviter petiolatis lanceolatis acutis grosse dentatis basi rotundatis subtruncatisve glabris, nervis subtus parce hispidulis, stipulis lanceolatis acuminatis ciliatis patentibus persistentibus, cymis parvis, pedunculis pedicellisque parce glanduloso-hispidis, floribus subtruncatis luteis, petalis liberis, baccis ovoideis parvis, pedicellis recurvatis.

Hab. Near Tugela, Natal, *J. M. Wood* (No. 3479).

Herba videtur. *Folia* $2\frac{1}{2}$–3 poll. longa, 1–$1\frac{1}{2}$ poll. lata; petiolus $\frac{1}{3}$ poll. longus. *Flores* $\frac{1}{10}$ poll. longi; pedunculi 1–$1\frac{1}{2}$ poll. longi. *Baccæ* $\frac{1}{4}$ poll. longæ.

A very peculiar and distinct species, to which perhaps Gerrard's No. 1134 may belong, but the specimen in the Kew Herbarium is incomplete, the inflorescence being detached and apparently belonging to another species, so that it is impossible to decide.—N. E. Brown.

Fig. 1. A bud. 2. An expanded flower. 3. A petal. 4. Two stamens, showing front and back view of anthers. 5. A flower after the petals have fallen. 6. Ovary and disk. *All enlarged.*

M.S del.

Vitis humilis, N.E.Br.

Plate 1566.

BRACHYLOPHON CURTISII, *Oliv.*

Malpighiaceæ. Tribe Banisterieæ.

Brachylophon, *Oliv.* (*gen. nov.*). *Calyx* 5–partitus eglandulosus, laciniis subæqualibus ovato-ellipticis obtusis. *Petala* 5 oblongo-elliptica obtusa integra, breviter unguiculata, æstivatione imbricata. *Stamina* 10 omnia antherifera alternatim breviora, filamentis angustis carnosulis glabris basi in disco brevissime coalitis anthera sublongioribus persistentibus; anthera linearis basifixa apice biporosa. *Ovarium* trilobum glabrum; styli elongati graciles divergentes; ovula solitaria pendula anatropa. *Carpella* fructifera secedentia turgida, pericarpio coriaceo reticulato sursum dorso carinato apice carina in ala obliqua brevissima continua. *Semen* . . . . — Frutex 3–5-*pedalis glaber.* Folia *opposita brevissime petiolata ovalia v. anguste elliptica acuminata basi cuneata integra glabra subtus scaberula.* Inflorescentia *terminalis subsessilis corymbosim racemosa; bracteæ squamiformes ovatæ acutæ; pedicelli graciles adscendentes flore longiores.* Flores $\frac{3}{4}$ *poll. diam.; petala* $\frac{1}{2}$ *poll. longa.* Carpella *fructifera* 4–5 *lin. longa,* 3 *lin. diam.*

Hab. Penang, on the Coast, *C. Curtis.*

I cannot assign this plant to any described genus of Malpighiaceæ. It has as to the inflorescence much resemblance to *Tristellateia*, but the structure of the fruit-carpel, without lateral outgrowths and with the usual dorsal wing of the *Banisterieæ* quite rudimentary, removes it far away.—D. Oliver.

Fig. 1. Stamens. 2. Pistil. 3. Fruit. Two carpels only developed. *Enlarged.*

M.S del

Brachylophon Curtisii, Oliv.

Plate 1567.

ALPINIA FRASERIANA, *Oliv.*

Scitamineæ. Tribe Zingibereæ.

A. Fraseriana, *Oliv.* (*sp. nov.*) ; caulibus floriferis e rhizomate erectis 1½–2-pedalibus foliaceis, foliis oblongo-ovalibus utrinque angustatis apice graciliter acuminatis breviter petiolatis glabris, racemis terminalibus breviter pedunculatis, floribus glomeratis brevissime pedicellatis, calycis tubo glabrato ore obtuse 3-lobato basi constricto, corollæ tubo calycem superante, limbi lobis subæqualibus late ellipticis obtusis, labello basi staminodiis lateralibus dentiformibus instructo, lobis lateralibus divergentibus ovato-rotundatis, lobo centrali bipartito segmentis oblongis obtusis, filamento late complanato corollæ lobo postico breviore, anthera coriacea convexa connectivo apice breviter producto oblongo-ovato, ovulis in loculis circ. 2–3.

Hab. North Borneo, *F. W. Burbidge, Dr. M. Fraser.*

Folia ½ ped. longa, circ. 1 poll. lata. *Inflorescentia* 2 poll. long. *Flores* ½ poll. longi.

In facies resembling *A. modesta*, F. von Mueller, of Rockingham Bay. Cuming's No. 1919, Philippine Coll., may be the same.—D. Oliver.

Fig. 1. Flower. 2. Labellum and stamen *in situ*. 3. Anthers. 4. Pistil. 5. Transverse section of ovary. 6. Fruit. *Enlarged.*

M.S. del

Alpinia Fraseriana. Oliv.

Plate 1568.

EUCLEA BILOCULARIS, *Hiern.*

Ebenaceæ.

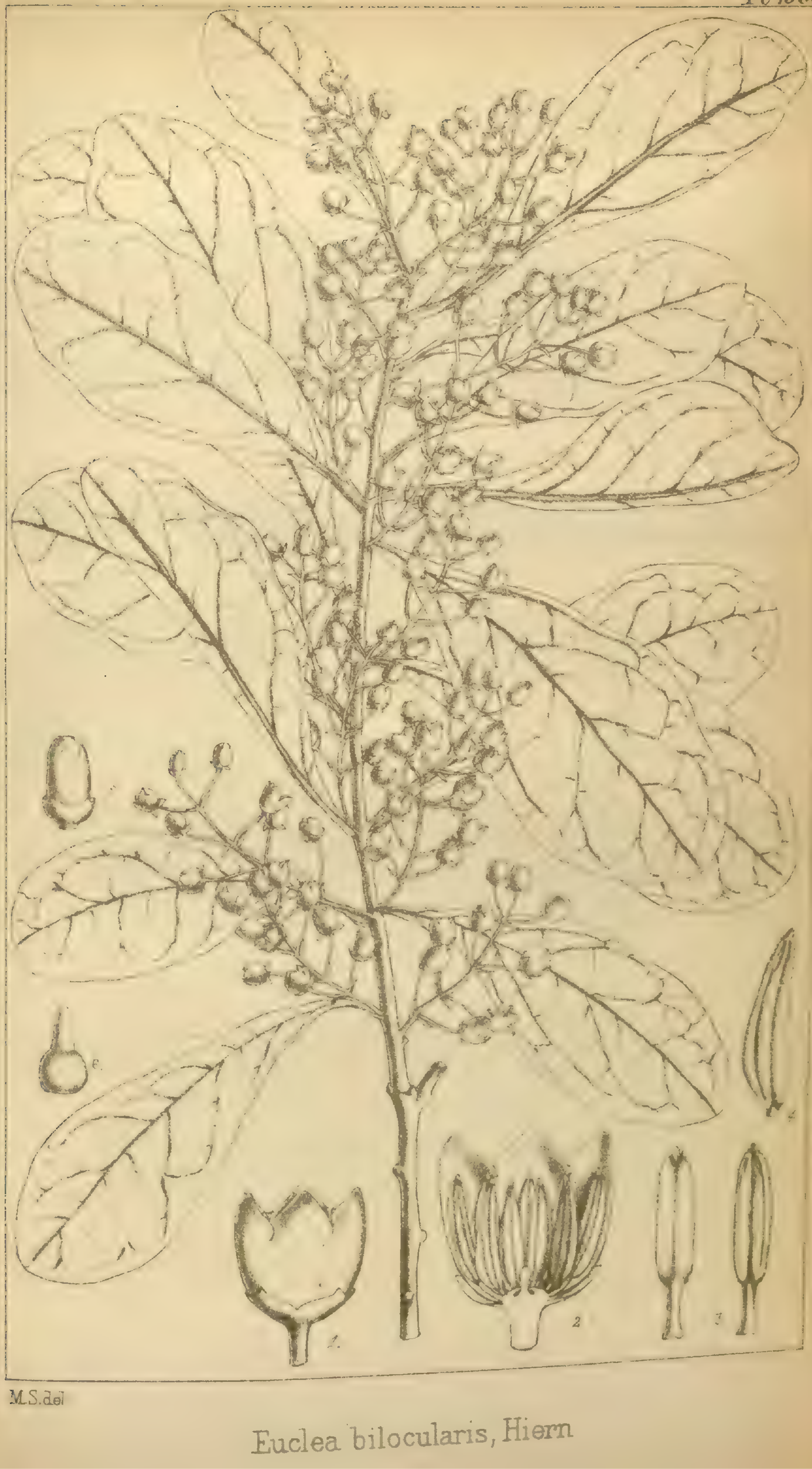
E. bilocularis, *Hiern, Monogr. Ebenaceæ*, 102–(♂); glaber; foliis obovato-oblongis oblanceolatisve obtusis basi cuneatim angustatis supra nitentibus subtus opacis venulis obscuris, racemis axillaribus folio brevioribus breviter pedunculatis, pedicellis gracilibus patentibus bracteatis, bracteis parvis ovalibus, calyce breviter 4-fido lobis late ovato-deltoideis, corolla urceolato-campanulata ore 4-loba lobis rotundatis; staminibus circ. 15 corollæ basi insertis interioribus anthera subsessili, antheris lanceolatis apiculatis.

Hab. Zanzibar Island, *Sir John Kirk.*

Ramuli graciles. *Folia* 2–2½ poll. longa, ⅔–1⅓ poll. lata, sicco rubro-nigrescentes. Racemi 1–1½ poll. longi; pedicelli ¼–⅓ poll. longi. *Flores* 1½–2 lin.

For excellent specimens of this *Euclea*, received since Mr. Hiern published his Monograph, we are indebted to Sir John Kirk, who first sent home the female specimens, though with very few flowers, some eighteen years ago, upon which Mr. Hiern based his description. Bojer's Madagascar specimens, referred to by Mr. Hiern, closely resemble the plant here figured.—D. Oliver.

Fig. 1 ♂ flower. 2. Same, longitudinal section. 3. Outer stamens. 4. Inner stamen. 5 ♀ bud. 6. Ovary. *Enlarged.*



M.S.del

Euclea bilocularis, Hiern

Plate 1569.

PHYLLANTHUS TENELLUS, *Roxb.*

Euphorbiaceæ. Tribe Phyllantheæ.

P. (Menarda) tenellus, *Roxb.*; herba v. frutex tenellus, glaberrimus, ramosus, ramis gracillimis, foliis subsessilibus distichis omnibus conformibus oblongo-obovatis apice rotundatis nervis divaricatis, stipulis ovato-subulatis, floribus minimis axillaribus, femineis solitariis masculis 1–2 immixtis longius pedicellatis, pedicellis femineis foliis brevioribus, sepalis 5, masc. late orbiculari-ovatis obovatisve obtusis, femineis paulo majoribus et angustioribus, staminibus 5 glandulis orbicularibus alternantibus, filamentis brevibus liberis recurvis, antheris suberectis ovoideis rimis verticalibus, ovario globoso, glandulis orbiculatis suffulto, stylis 3 horizontalibus brevibus liberis 2-fidis cruribus recurvis, capsula globosa tenuiter crustacea 3-cocca, coccis 2-valvibus 2-spermis.—*Roxb. Fl. Ind.* iii. 608, et *Ic. ined.*; *Muell. Arg.* in *Linnæa*, xxxii. 7, et in *DC. Prodr.* XV. ii. 338; *Baker, Fl. Maurit.* 310; *Wall. Cat.* 7892 A. (*the upper left-hand specimen only*).

Hab. Mauritius, *Capt. Tennant* (cultivated in Calcutta Botanical Garden, 1862); Seychelle Islands; Madagascar; South Africa, and Arabia.

Totus glaberrimus; axis abbreviatus, ramulis patulis angulatis filiformibus superatus. *Folia* laxe pinnatim disposita, $\frac{1}{3}$–$\frac{1}{2}$ poll. longa, membranacea, nervis obscuris, basi acuta; petiolo brevissimo. *Fl. masc.* breviter pedicellati, $\frac{1}{30}$ poll. diam.; *fem.* longius pedicellati. *Capsula* $\frac{1}{12}$ poll. diam., leviter lobata. *Semina* (in exemplaribus e Natal lectis) pallida, seriatim tuberculata.

During the examination of the Wallichian species of *Phyllanthus* for the 'Flora of British India' I had occasion to unravel those comprised under the name of *P. tenellus* (No. 7892 of his list); and finding amongst them a single specimen of the original plant of Roxburgh, which Mueller does not appear to have seen (for he does not cite Wallich's example), I have thought it of sufficient interest to figure here. Mueller, who has correctly referred to the same species various African and Arabian specimens of *Phyllanthus*, has subdivided the whole under seven varieties, of which the first is this plant, under the name of *Roxburghii*, differing chiefly in the very much narrower bases of the leaves. Roxburgh describes his plant at five years old as being a shrub with a straight woody twig $3\frac{1}{2}$ feet high; but the Cape and Seychelle Island specimens are clearly annual, and Mueller describes his var. *Roxburghii* as either annual or perennial. *P. tenellus* belongs to the small section *Menarda*, which is confined to Africa, its islands, and Arabia.—J. D. Hooker.

Fig. 1. Portion of branch and stipule. 2. Male flower. 3. Stamen. 4. Female flower. 5. The same, with the ovary removed. 6. Transverse section of ovary. 7. Capsule. *All greatly enlarged.*

M.S.del.

Phyllanthus tenellus, Roxb

Plate 1570.

ANEMONE HENRYI, *Oliv.*

Ranunculaceæ. Tribe Anemoneæ.

A. (§ **Hepatica**) **Henryi**, *Oliv.* (*sp. nov.*) ; acaulis, *foliis* longe petiolatis, lamina rotundata basi profunde cordata breviter 3–5-lobata lobis 3 anticis sæpius late crenato-lobulatis lobulis obtusissimis *mucronulatis*, glabra v. marginem versus utrinque pilis paucis, petiolis pedunculisque parce pilosis, involucro herbaceo pilosulo tripartito segmentis late ellipticis obovatisve tridentatis, sepalis 6 late oblanceolatis involucro subduplo longioribus, carpellis dense pilosis.

Hab. Patung, Central China, "on high mountains."—Dr. Henry.

Folia $1\frac{1}{4}$–$1\frac{2}{3}$ poll. lata ; petiolus 2–$3\frac{1}{2}$ poll. longus. *Flores* $\frac{1}{2}$–$\frac{3}{4}$ poll. diam. ; pedunculus petiolos subæquans.

Dr. Henry describes the flower as yellow. The common *Hepatica* also occurs in the North of China.—D. Oliver.

Fig. 1. Stamen. 2. Carpels. *Enlarged.*

PL 1570

M S. del

Anemone Henryi, Oliv

Plate 1571.

PROTIUM GUIANENSE, *March.* var.

Burseraceæ.

P. guianense, *Marchand in Baillon, Adansonia*, viii. 52; glaberrimum, foliis 3–5-foliolatis, foliolis petiolulatis lateralibus oppositis ovato-lanceolatis v. ellipticis obtusiuscule acuminatis nervis lateralibus utrinque circ. 12–15, paniculis axillaribus sessilibus petiolo subæquilongis, pedicellis flore sæpius brevioribus, calyce 5-fido lobis deltoideis, petalis ovato-lanceolatis crassiusculis calyce 3–4-plo longioribus marginibus minutissime tomentellis æstivatione valvatis, ovario glabro ovoideo basi disco crasso circumdato, stylo brevissimo, stigmate obtuso 5-lobulato, drupa oblique ovoidea v. ellipsoidea unilocular endocarpio osseo.

Hab. St. Lucia, West Indies, *Anderson*; *E. D. M. Hooper, Esq.*

Ramuli subteretes parce lenticellati læves. *Folia* alterna, petiolus $1\frac{1}{2}$–$2\frac{1}{2}$ poll. longus; foliola tenuiter coriacea $3\frac{1}{2}$–$4\frac{1}{2}$ poll. longa $1\frac{1}{4}$–2 poll. lata; petiolulus $\frac{1}{3}$ poll., impar $\frac{1}{2}$–$\frac{3}{4}$ poll. longus. *Paniculæ* multifloræ e basi ramosæ $1\frac{1}{2}$–2 poll. longæ. *Flores* 1–$1\frac{1}{2}$ lin. *Fructus* 1 poll. longus, obtuse trigonus 6–7 lin. diam.

For synonymy of the species see Professor Engler's Monograph (De Candolle, 'Phanerog. Monogr.' iv. 72). The above description I have restricted to the St. Lucia specimens cited. On account of the remarkable difference between the fruit of our plant and that figured by A. Richard (in Ramon de la Sagra, 'Flora Cubana:' *Icones*, t. 37), I should not have ventured to regard them as conspecific were it not that Prof. Engler feels quite satisfied as to their identity.

Our plant is sent by Mr. Hooper of the Indian Forest Department, collected by him while on special duty in connection with West Indian forests, as the *Gommier l'encens* of St. Lucia. A specimen is in the Kew Herbarium (from Bishop Goodenough's Collection) with the MS. name *Amyris balsamifera*, unlocalised.

Aublet, whose specific name (under *Icica*) is retained, gives the name *Bois d'encens* as that by which the tree was known to the French of Guiana, and M. Marchand (*l. c.*) says it affords the *Tacahamaque huileuse incolore* and a resin called *Encens de Cayenne*. This, of course, is the Continental form.—D. Oliver.

Fig. 1. Flower. 2. Same, petals and calyx-lobes removed. 3. Stamens. 4. Ovary. 5. Same, transverse section. 6. Transverse section of fruit. *Excepting* 6, *enlarged.*

M S del

Protium guianense, March.

Plate 1572.

SENECIO BAURII, *Oliv.*

Compositæ. Tribe Senecionideæ.

S. Baurii, *Oliv.* (*sp. nov.*); suffruticosus, ramis foliosis adscendentibus gracilibus tenuiter lanatis, foliis angustis sessilibus lineari-lanceolatis acutiusculis integris v. utrinque 1–3-denticulatis rigidiusculis glabrescentibus eveniis, capitulis pedicellatis mediocribus 20–25-floris radiatis in corymbis terminalibus 10–15-cephalis dispositis, involucri bracteis 7–8 oblanceolatis vel interioribus ellipticis acutatis parce lanatis glabratisve, ligulis paucis revolutis, ovariis glabris lævibusque.

Hab. Near Gatberg, Kaffraria.—*Rev. R. Baur.*

Ramuli floriferi pedales per totam longitudinem foliosi. *Folia* arrecta 4–6 lin. longa, 1 lin. lata. *Capitula* involucro campanulato, calyculi bracteolis paucis lanceolatis brevibus.—D. Oliver.

Fig. 1. Capitulum. 2. Involucral bracts, outer and inner. 3 Ray-floret. 4. Seta of pappus. 5. Disk-floret. 6. Anthers. 7. Style. *Enlarged.*

M.S.del

Senecio Baurii, Oliv

Plate 1573.

SANTIRIA ? BALSAMIFERA, *Oliv.*

Burseraceæ.

S. ? balsamifera, *Oliv.* (*sp. nov.*); arbor glaberrima, folia alterna sæpius 5-foliolata petiolata, foliolis tenuiter coriaceis ovato-lanceolatis (vel foliolo terminali elliptico) breviter obtuse acuminatis v. cuspidatis basi plus minus rotundatis petiolulatis, paniculis divaricatis rigidis quasi-terminalibus, floribus pedicellatis trimeris, sepalis late ovato-rotundatis concavis, petalis ovato-rotundatis calyce 2-plo longioribus æstivatione imbricatis, staminibus 6 basi disci insertis, filamentis subulatis intus puberulis, antheris ovatis dorsifixis, disco carnoso libero, ovario glabro biloculare, ovulis geminatis collateralibus, stylo brevissimo crassiusculo, stigmate capitato.

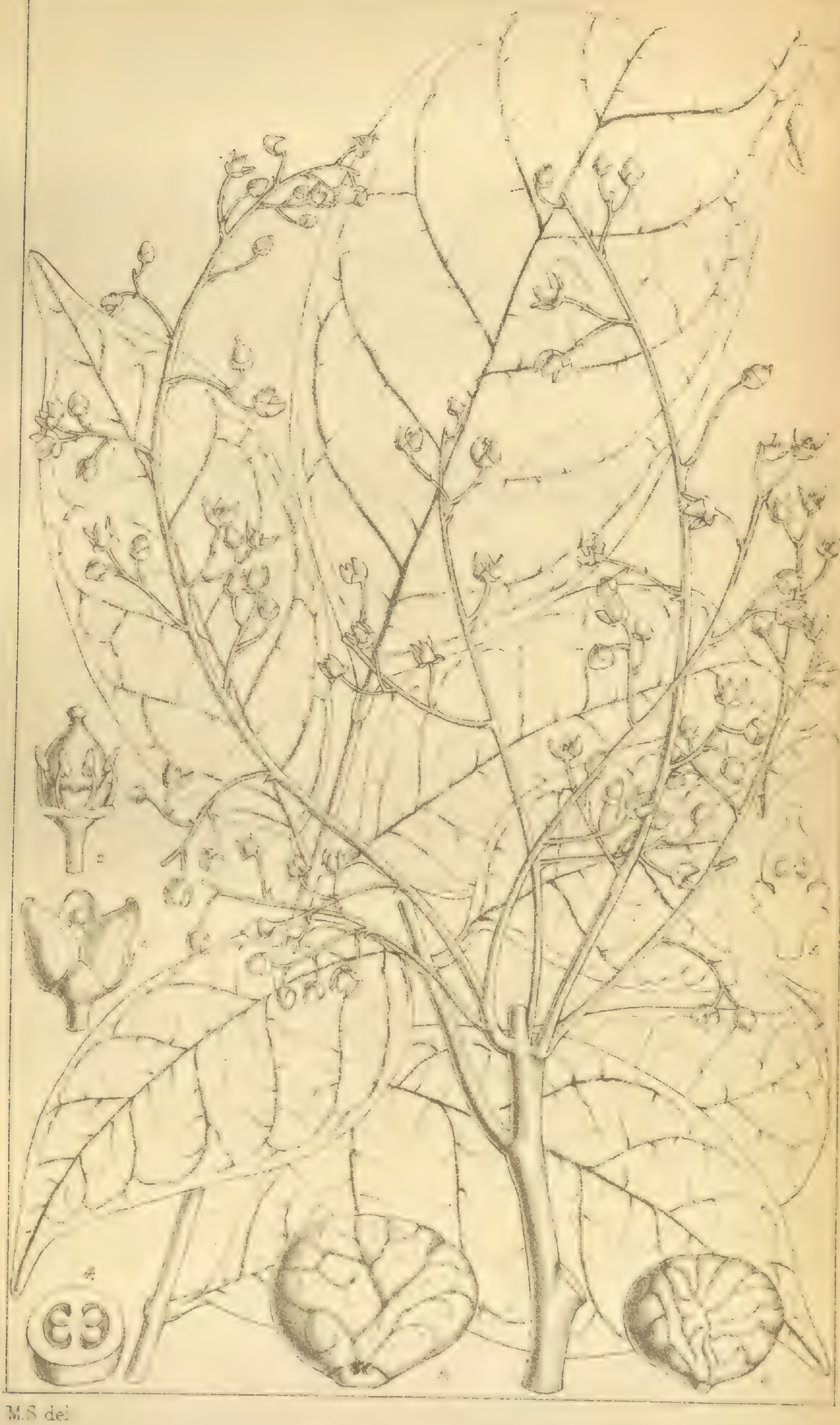
Hab. Island of St. Thomas, W. Africa, *G. Mann*, *Mr. Moller* (communicated by Dr. Henriques, of Coimbra).

Arbor 60–80-pedalis (*Mann*). *Folia* alterna sæpius 5-foliolata foliolata), foliolis 4–6 (v. rarius 8–9) poll. longis, $1\frac{3}{4}$–3 (–$3\frac{3}{4}$ (3-5-latis; petiolulus $\frac{1}{4}$–$\frac{1}{3}$ poll. longus. *Flores* $\frac{1}{6}$–$\frac{1}{4}$ poll. lati.

The pericarp I have not seen; but we have, through the kindness of Dr. Henriques, seeds, each enclosed in a thin crustaceous endocarp, more or less plano-convex or depressed-hemispherical, marked on the convex side with the depressed coarse reticulation of an external vascular plexus. The structure of the contained seed I cannot clearly describe. It appears to be exalbuminous, with fleshy lobed or plicate cotyledons. The endocarp roundish or elliptical in contour, 1–$1\frac{1}{4}$ in. by $\frac{3}{4}$–$\frac{5}{6}$ in. and $\frac{1}{3}$–$\frac{1}{2}$ in. thick.

Both Mr. Mann and Dr. Henriques state that this is the 'Balsam of St. Thomas.' From Mr. Mann we possess only leafy specimens and part of the fruit; so that they could not be assigned to their genus when the first volume of the 'Flora of Tropical Africa' was in progress. Indeed, until we have the entire fruit, I am afraid the generic determination must remain in doubt, all known species of *Santiria* hitherto being Malayan, or from the Indian Archipelago. Professor Engler, the monographer of Burseraceæ, who always allows me to consult him in matters over which he has mastery, feels the same hesitation in accepting it as a *Santiria*. The floral structure agrees, but the fruit may not improbably be different.—D. Oliver.

Fig. 1. Flower. 2. Same, sepals and petals removed. 3. Longitudinal section of ovary and disk. 4. Transverse section of ovary. 5, 6. Endocarp (?), two views. (1–4 *enlarged.*)



M.S del

Santiria? balsamifera. Oliv

Plate 1574.

PANAX CISSIFLORUS, *Baker.*

Araliaceæ.

P. cissiflorus, *Baker in Journ. Linn. Soc.* xx. 154; glaber, foliis magnis deltoideis bipinnatis, foliolis 2–4-jugis oblongis acutis integris vel obscure dentatis, paniculis ternis axillaribus folio multo brevioribus ramis patulis vel ascendentibus apice simpliciter umbellatis, pedicellis flore longioribus, umbellis 5–6-floris, ovario globoso triloculari profunde sulcato, calycis limbo angusto patulo dentato, petalis 5 viridibus calyptratim conniventibus ovario brevioribus, stylis erectis ad basin liberis.

Hab. Central Madagascar, *Baron*, 1775.

Folia pedalia, pinnis bijugis, foliolis superioribus 2–3 poll. longis. *Ovarium* floriferum $1\frac{1}{2}$ lin. longum et latum.

Amongst the very numerous new plants (upwards of a thousand) lately discovered by the Rev. R. Baron, F.L.S., in Madagascar, are about fifteen Araliaceæ, most of which belong to the genus *Panax*.—J. G. Baker.

Fig. 1. A flower, with the corolla fallen. 2. Calyptrate corolla. 3. Ovary and styles. 4. Stamens. 5. Horizontal section of ovary. 6. Vertical section of ovary. *All enlarged.*

M.S. del

Panax cissiflorus, Baker.

Plate 1575.

CANARIUM HIRTELLUM, *A. W. Benn.*

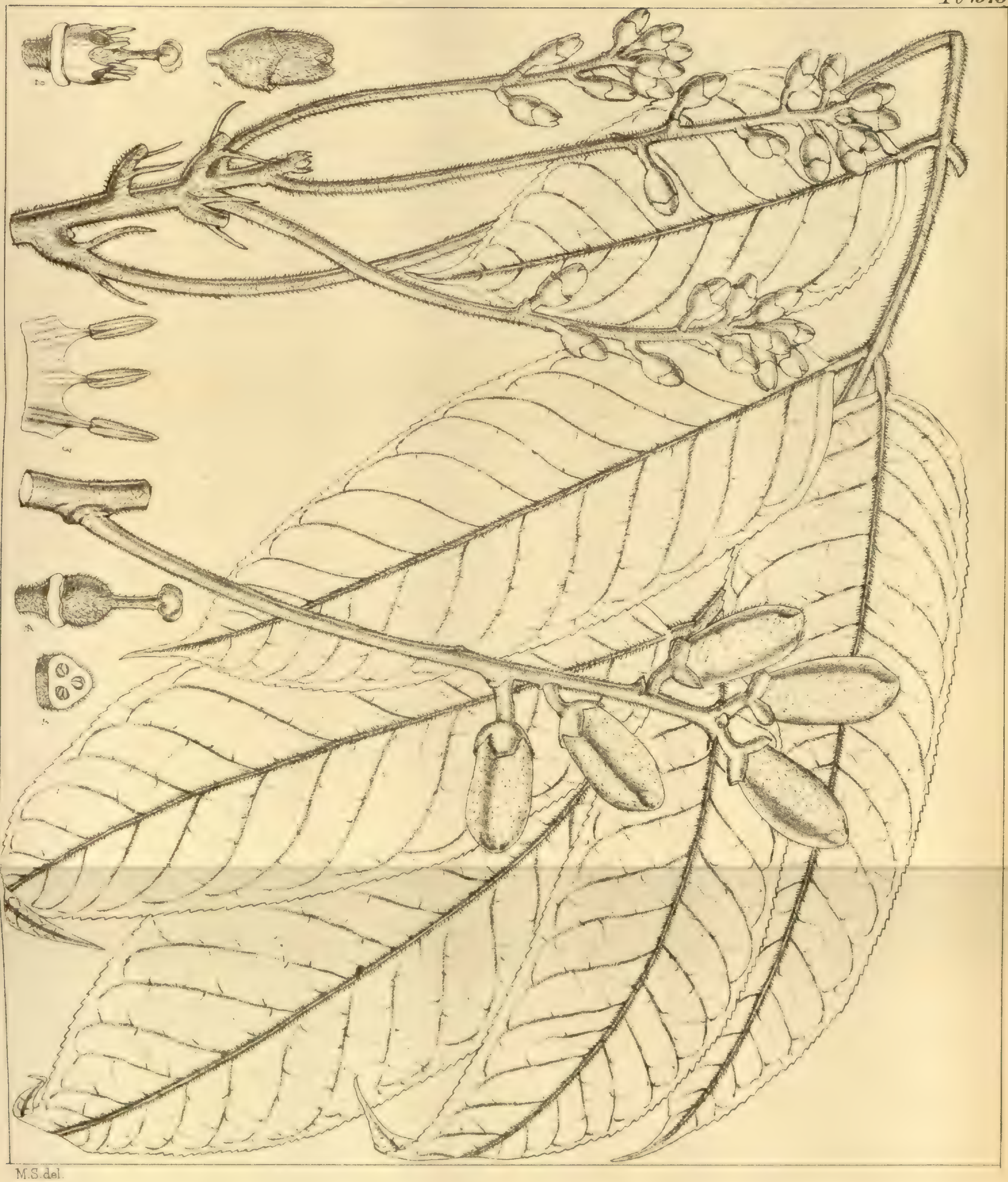
Burseraceæ.

C. hirtellum, *A. W. Bennett in Flora Brit. India,* i. 534; ramulis fulvo- v. ferrugineo-tomentosis, foliis 5–7-foliolatis longe petiolatis rhachide tomentella foliolis oblongo-ellipticis acuminatis minute serrulatis supra, costa hirtella excepta, glabrata reticulata, subtus præcipue in nervis venisque hirsutiusculis, 'racemis' folio brevioribus hirtellis, floribus tomentosis breviter pedicellatis, calyce campanulato late 3-lobato, petalis calyce duplo longioribus, filamentis ad medium usque coalitis, ovario dense hirsuto, drupis trigonis oblongis parce hirsutis. *Engler in A. de Candolle Monogr. Phan.* iv. 121.

Hab. Penang, *Wallich* (*Cat.* 9047); *C. Curtis.*

Folia 9–15 poll. longa; petiolus 3–5 poll. longus; foliolis $3\frac{1}{2}$–6 poll. longis, lateralibus sæpius 3–2-jugis; petiolulus $\frac{1}{4}$ poll. longus. *Stipulæ* lineari-subulatæ, $\frac{1}{3}$–$\frac{2}{3}$ poll. longæ. *Flores* 4–5 poll. longi. *Drupa* poll. longa.—D. Oliver.

Fig. 1. Unexpanded flower. 2. Flower, the calyx and petals removed. 3. Stamens. 4. Pistil. 5. Transverse section of ovary. *Enlarged.*



M.S. del.

Canarium hirtellum, A.W.B.

Plate 1576.

LEBECKIA INFLATA, *Bolus.*

Leguminosæ. Tribe Genisteæ.

L. inflata, *Bolus* (*sp. nov.*) ; annua humilis erecta, ramosa, vix pedalis, tenuiter sericea demum glabrescens ; foliis 3-foliolatis, petiolatis, fere glabris, foliolis linearibus acutis ; racemis terminalibus sub-laxe 4–8-floris, floribus mediocribus glabris ; calyce campanulato, lobis deltoideis, sinubus latis rotundatis ; legumine oblongo inflato, breviter rostrato, subsessili, plurispermo.

Hab. In clivis orientalibus montis Diaboli prope Cape Town, alt. circ. 1000 ped., fl. Novr. legit *H. Bolus* (No. 4826).

Folia cum petiolis 3–6 centim. longa; petioli foliolis breviores, 1–2 cm. longi. *Flores* 1·2 cm. longi ; calyx 6 millim. longus. *Legumen* 3·0–3·5 cm. longum, 1·0 cm. latum.

Apparently nearest to *L. leptophylla, Benth.*, which I have not seen. The inflated pods are very unusual in the genus ; they resemble those of a *Crotalaria.* I have only found two or three plants.—H. Bolus.

Fig. 1. Calyx and pistil. 2. Vexillum. 3. Ala. 4. Carina. 5. Staminal sheath. 6. Ovary, laid open. *Enlarged.*

M S. del.

Lebeckia inflata, Bolus.

Plate 1577.

SPERANSKIA HENRYI, *Oliv.*

Euphorbiaceæ. Tribe Crotoneæ.

S. Henryi, *Oliv.* (*sp. nov.*); foliis conspicue petiolatis ovatis v. ovato-ellipticis.

Hab. Ichang, China, *Dr. Henry* (No. 1273 and No. 1372).

Caules $\frac{1}{2}$–2 pedales basi lignescentes, plus minus ramosi, ramulis foliiferis pilosulis. *Folia* basi obtusa v. late cuneata apice late acutata v. obtusiuscula utrinque serrato-dentata supra glabrata subtus pubescentia, $\frac{3}{4}$–$1\frac{3}{4}$ poll. longa $\frac{1}{2}$–$1\frac{1}{4}$ poll. lata; petiolus hirtellus $\frac{1}{4}$–$\frac{1}{2}$ poll. longus. *Inflorescentia S. tuberculatæ* (Baill.). *Fructus* trilobus $\frac{1}{4}$ poll. latus pedicellatus, carpellis dorso conspicue tuberculatis; pedicellus hirtellus ad $2\frac{1}{2}$ lin. longus.

Although very different from the original specimens of Bunge upon which *S. tuberculata* was based, with their narrow sessile or subsessile leaves, it is not improbable that intermediate forms may be found connecting them with the present plant.—D. Oliver.

Fig. 1. Staminate flower. 2. Sepal. 3. Petal. 4. Pistillate flower. 5. Separate coccus of fruit. 6. Seed. *Enlarged.*

M.S del

Speranskia Henryi, Oliv.

Plate 1578.

ERISMANTHUS SINENSIS, *Oliv.*

Euphorbiaceæ. Tribe Crotoneæ.

E. sinensis, *Oliv.* (*sp. nov.*); foliis brevissime petiolatis ovali-oblongis v. interdum ellipticis obtuse acuminatis basi oblique et anguste subcordatis obsolete serrulatis breviter coriaceis glabris venulis subtus haud prominulis, fl. ♂ staminibus circ. 15, stylodio elongato piloso apice truncato v. emarginato, fl. ♀ apetalis, sepalis oblongo-lanceolatis ovarium paullo superantibus.

Hab. Hainan, *Rev. B. C. Henry* (No. 23 and No. 28), communicated by Mr. C. Ford.

Arbor mediocris v. parva, ramulis longiusculis dependentibus teretibus glabrescentibus. *Folia* $3\frac{1}{2}$–$4\frac{1}{2}$ poll. longa, 1–$1\frac{3}{4}$ poll. lata; stipulæ oblongæ acutiusculæ appresse hirsutæ erectæ demum deciduæ $\frac{1}{4}$–$\frac{1}{3}$ poll. longæ. *Flores* monoici: fl. ♂ in spicis plurifloris alabastro dense congestis axillaribus brevissime pedunculatis, tempore florifero floribus singillatim longe pedicellatis pedicello gracillimo longissimo patentim piloso subito emergente basi bracteato et bibracteolato; *bractea* parva ovata hirsuta $\frac{1}{15}$ poll. longa, bracteolis lateralibus paullo minoribus; *sepala* elliptica recurva æstivatione imbricata; *petala* calyce minora oblanceolata; *antheræ* late ovato-rotundatæ v. subreniformes subdidymæ emarginatæ longitudinaliter dehiscentes, filamenta brevissima; *stylodium* elongatum $1\frac{1}{2}$ lin. longum. *Fl.* ♀: axillares solitarii pedunculati apetali; *sepala* 1 lin. longa oblongo-lanceolata hirsuta interdum margine glanduloso-denticulata ovarium superantia; *ovarium* hirsutum trilobum; *stylus* basi columnaris profunde trifidus ramis stigmatosis bipartitis hirto-papillosis.

This singular plant very nearly approaches the Wallichian *E. obliquus* of Penang and Perak, from which it differs in the small sepals of the pistillate flower and inconspicuous venation of the under side of the leaf. Prior to the receipt of these Hainan specimens, the remarkable and evidently sudden outgrowth of the hairy and thread-like pedicels at the time of flowering (reminding one of the fruit pedicels of *Rhus Cotinus*) was unknown. We have, however, since received Malayan specimens of *E. obliquus* from Dr. King in a similar stage of development.

From the inadequate material at Dr. Mueller's disposal when he described the genus for the 'Prodromus' (xv. pl. 2, p. 1138), the flowers of both sexes were stated to be apetalous. We find the staminate flowers have petals.—D. Oliver.

Fig. 1. Staminate flower, with pedicel, bract, and bracteoles. 2. Flower alone with projecting stylode. 3. Same, the anthers removed, showing sepals and petals. 4. Stamens. 5. Pistillate flower. 6. Calyx and ovary of same. 7. Transverse section of ovary. *Most of these enlarged.*

M.S.del.

Erismanthus sinensis, Oliv.

PLATE 1579.

PITTOSPORUM PAUCIFLORUM, *H. & A. var.*

PITTOSPORACEÆ.

P. pauciflorum, *Hook. & Arn., Bot. Beechey*, 168, *tab.* xxxii. var. *brevicalyx*; ramulis ultimis gracilibus glabratis, foliis oblanceolatis acuminatis basi in petiolum attenuatis tenuiter coriaceis glabris, inflorescentia corymbiformi quasi terminali pluriflora plus minus tomentella deinde glabrata, calyce irregulariter 5-partito segmentis ovatis v. ovato-lanceolatis sæpe inæqualibus corolla 5–6-plo brevioribus, capsulis subglobosis.

HAB. China: Ichang, *Dr. Henry*; Kiukiang, *Mr. Maries.*

Frutex v. *arbuscula*, ramulis teretibus. *Folia* 2–3 (–4½) poll. longa; petiolus $\frac{1}{6}$–$\frac{1}{3}$ poll. longus. *Flores* $\frac{1}{3}$ poll. longi, petalis apice recurvis. *Filamenta* complanata glabra. *Ovarium* tomentellum. *Capsula* $\frac{1}{4}$–$\frac{1}{3}$ poll. diam.—D. OLIVER.

Fig. 1. Calyx-segment, the slight denticulation of the margin unusually marked. 2. Stamens. 3. Pistil. 4. Transverse section of ovary. 5. Fruiting branch. 6. Seeds. Excepting fig. 5 *enlarged.*

M.S del

Pittosporum pauciflorum, H.& A. var.

Plate 1580.

CHLORANTHUS ANGUSTIFOLIUS, *Oliv.*

Chloranthaceæ.

C. (Tricercandra) angustifolius, *Oliv.* (*sp. nov.*); caule herbaceo erecto, foliis oppositis anguste lanceolatis acuminatis serratis basin versus integris in petiolum angustatis membranaceis glabris, stipulis divisis laciniis brevibus anguste subulatis, spica florifera simplicissima multiflora, squama antherifera tripartita segmentis anguste linearibus antheris lateralibus 'unilocularibus' dithecis, mediana biloculari tetrathecis thecis per paria discretis.

Hab. Ichang, China, *Dr. Henry* (No. 1195).

Herba 1–1½ ped. alta, caule gracili glabro. *Folia* 3–4½ poll. longa, ⅔–1 poll. lata. *Spica* florifera 2–2½ poll. longa.

This new *Chloranthus* is interesting in the *Tricercandræ* in the conspicuous separation of the two halves (according to the accepted view) of the intermediate anther of the three, as in *Chloranthus* proper.—D. Oliver.

Fig. 1. Petiole-bases and stipules. 2. Flower with bract and anterior view of antheriferous scale. 3. Ovary and inner face of anther-scale. 4. Base of latter enlarged. 5. Ovary. 6. Same, longitudinal section. *Enlarged.*

M.S. del

Chloranthus angustifolius, Oliv.

Plate 1581.

DORSTENIA ZANZIBARICA, *Oliv.*

Urticaceæ. Tribe Moreæ.

D. zanzibarica, *Oliv.* (*sp. nov.*); caulescens, caule simplici 1–2-pedali erecto carnoso cylindrico inferne nudo glabrato lactescente, foliis ellipticis v. late oblanceolatis obtusiusculis basi in petiolum cuneatim angustatis utrinque sinuato-dentatis supra minutissime et parce puberulis subtus glabratis, receptaculis axillaribus pedunculatis peltatis sæpius rotundato-deltoideis angulis in appendicibus 3 plus minus productis, floribus ♂ & ♀ intermixtis, fl. ♀ perigonii foliolis 2 vel 3 late rotundatis.

Hab. Zanzibar (sent living to the Royal Gardens by *Sir John Kirk*). We have a specimen of probably the same species sent by Mr. Mitten, introduced by the late Bishop Hannington, from the Usagara Mountains.

Folia 2–3½ poll. longa, 1–1¼ poll. lata; petiolus ⅓–½ poll. longus. *Receptacula* ⅓–½ poll. diam., radiis 1–3 lin. longis; pedunculus 4–6 lin. longus.—D. Oliver.

Fig. 1. Receptacle. 2. Same, section. 3 & 4. ♂ flowers. 5. Pistil. 6. Same, ovary laid open. *Enlarged.*

M.J. del.

Dorstenia zanzibarica, Oliv.

Plate 1582.

BEAUMONTIA BREVITUBA, *Oliv.*

Apocynaceæ. Tribe Echitideæ.

B. brevituba, *Oliv.* (*sp. nov.*); foliis oppositis oblanceolato- v. obovato-oblongis apiculatis v. breviter acuminatis basi cuneatis supra glabrescentibus subtus pubescentibus utrinque 12–15-nerviis, cymis paucifloris, calycis lobis amplis ovato-ellipticis obtusis v. interioribus late acutatis, corolla ampla 5-fida segmentis late ovatis patentibus tubo ore abrupte ampliato.

Hab. Hainan, *Rev. B. C. Henry*; communicated by Mr. Charles Ford.

Arbor scandens, ramulis crassitie pennæ cygni, innovationes ferrugineo-puberulæ. *Folia* superiora (in ramulis floriferis) $3\frac{1}{2}$–5–7 poll. longa, $1\frac{1}{2}$–3 poll. lata; petiolus $\frac{1}{2}$ poll. longus. Pedicelli 1–$1\frac{1}{2}$ poll. longi, tomentelli. *Flores* albi fragrantes $3\frac{1}{2}$–4 poll. diam. *Sepala* $1\frac{1}{2}$ poll. longa, $\frac{3}{4}$–1 poll. lata.

Allied to *B. grandiflora*, Wall., from which it differs in the broad calyx-segments, and more markedly in the form of the corolla, which is rather rotate than infundibuliform, as it is in *B. grandiflora*. In the latter species, too, the lobes of the corolla are relatively very short.

The other Indian and Archipelago species known to me have smaller calyx-lobes. We have, however, from Siam (*Mr. Murton*) and the mountains of Cambodia (*M. Harmand*, communicated by M. Pierre) specimens which nearly approach the Hainan plant.—D. Oliver.

Fig. 1. Base of corolla-tube with stamens. 2. Anthers. 3. Ovary and surrounding disk. 2 and 3 *enlarged*.

M. S. del

Beaumontia brevituba, Oliv.

Plate 1583.

APOROSA BENTHAMIANA, *Hook. f.*

Euphorbiaceæ. Tribe Phyllantheæ.

A. Benthamiana, *Hook. f.*; glaberrima, robusta, foliis magnis coriaceis breviter petiolatis lineari-oblongis acutis v. caudato-acuminatis basi anguste cordatis supra lævibus, stipulis amplis foliaceis complicatis et falcatis acuminatis, floribus masculis minimis in spicam amentiformem densissime confertis, ovario globoso ellipsoideo hirsuto, fructu ellipsoideo 3-loculari.

Hab. Malacca, *Maingay*; Perak, *Kunstler*; ? Singapore, *Cantley*.

Ramuli cylindracei, læves. *Folia* 8–18 poll. longa, 3–5 poll. lata; nervis utrinque costæ 12–16 subtus validis, nervulis tenuibus; petiolus robustus, $\frac{1}{3}$–$\frac{1}{2}$ poll. longus; stipulæ coriaceæ, 1–1$\frac{1}{2}$ poll. longæ. *Spicæ masculæ* axillares, confertæ, pollicares, breviter pedunculatæ, cylindraceæ, obtusæ; *sepala* 4, minima, ovata; *stamina* 2, filamentis elongatis, antheris minutis. *Flores feminei* ramis defoliatis inserti, in spicas breves sessiles dispositi, conferti, sessiles; *sepala* parva, ovata; *ovaria* sessilia; *stigmata* 3, depressa, bifida, lobis acutis. *Fructus* $\frac{1}{2}$–$\frac{2}{3}$ poll. longus, teres, glaber, lævis, stigmatibus diu persistentibus coronatus. *Semina* immatura trigona.

This is the plant of Maingay's, alluded to by Bentham (in *Gen. Plant.* iii. 282) as Miquel's *Antidesma lunatum*, from which it differs in the petioled leaves and in being perfectly glabrous everywhere except the sepals and ovary. Both belong to a section of *Aporosa* remarkable for its large falcate stipules. The Singapore plant, which I have above doubtfully referred to this, has still larger petioles and membranous leaves, broader upwards; it may be a different species.—J. D. Hooker.

Fig. 1. Branch with leaf and male flowers. 2. Male flowers. 3. Anthers. 4. Branch with female flowers. 5. Female flower with the ovary advanced. 6. Branch with fruit. 7. Transverse section of fruit. All but figs. 1, 4, 6, are *enlarged*.

M.S.del.

Aporosa Benthamiana Hk.f.

Plate 1584.

TIARELLA POLYPHYLLA, *Don.*

Saxifragaceæ.

T. polyphylla, *Don, Prodr. Fl. Nepal.* 210; caulibus erectis 2–4-phyllis gracilibus glanduloso-pubescentibus et parce patentim pilosis, foliis cordatis 3–5-lobatis, lobo intermedio majore subdeltoideo, apiculato-crenatis, pagina superiore parce setuloso-pilosulis inferiore puberulis, radicalibus longe petiolatis petiolis laxe pilosis, caulinis breviter petiolatis, racemis erectis multifloris pedunculis inferioribus brevibus sæpe 2–3-floris, calycis puberuli laciniis lanceolatis, petalis angustissimis inconspicuis v. 0.

Hab. Himalaya: Nepal, Sikkim, and Bhotan, *various collectors*; China, Kiukiang, *Mr. Maries*; Patung, *Dr. Henry* (*specimens figured*); Japan, *various collectors*.

Herba 1½–2-pedalis. *Folia* radicalia 1½–2½ poll. lata; petiolus 3–4 poll. longus. *Racemi* demum elongati 4–8 poll. longi. *Flores* rubri. *Carpella* fructifera deflexa valde inæqualia.—D. Oliver.

Fig. 1. Flower and bract. 2. Flower laid open. 3. Ovary. 4. Same, vertical section showing parietal placenta. *Enlarged.*

Tiarella polyphylla, Don.

Plate 1585.

LONICERA PILEATA, *Oliv.*

Caprifoliaceæ.

L. (Xylosteum) pileata, *Oliv.* (*sp. nov.*); frutex ramosissimus, ramulis gracilibus hirtellis, foliis parvis internodiis sæpius longioribus ovato- v. elliptico-lanceolatis obtusis breviter petiolatis glabris v. costa parce hirtella, floribus geminatis brevissime pedunculatis, bracteis herbaceis lanceolatis v. linearibus, bracteolis cupulatim connatis, calycis limbo 5-dentato dentibus brevibus ovatis basi in vaginam reversam ovario paullo breviorem producto, corollæ tubo basi gibboso parce hirtello, limbi lobis ovato-rotundatis, staminibus exsertis, ovariis glabris trilocularibus basi breviter connatis.

Hab. Ichang, China, *Dr. Henry* (No. 1236).

Folia $\frac{1}{2}$–1 poll. longa, 3–5 lin. lata. *Flores* albi folio breviores $\frac{1}{3}$ poll. longi.

The singular cap-like emergence around the base of the calyx-limb, sheathing and concealing the ovary and margin of the connate bracteoles, is very curious. It may be expected to occur in other species.—D. Oliver.

Fig. 1. Pair of flowers. 2. Same, the corollas and bracteolar cupule removed. 3. Longitudinal section of ovary. *Enlarged.*

Plate 1586.

TRIOSTEUM SINUATUM, *Maxim.*

Caprifoliaceæ. Tribe Lonicereæ.

T. sinuatum, *Maximowicz in Diag. pl. nov., Dec.* viii. (1870) p. 553 (*ex descr.*) ; tomentosum vel molliter pubescens, foliis ternatis v. oppositis connatis membranaceis ovato-ellipticis acute acuminatis leviter sinuatis lamina basi abrupte angustata quasi petiolata, nervis primariis utrinque 5–7, floribus solitariis v. binis sessilibus, bracteolis herbaceis linearibus calycem sæpe æquantibus, calycis lobis linearibus erectis ovarii tubo hirsuto æquilongis corolla 3–5-plo brevioribus, corollæ lobis rotundatis venulis reticulatis.

Hab. Hills near Mukden, North China, *H. E. M. James, Esq.*

Folia 5–6 poll. longa, lamina $2\frac{1}{4}$–$2\frac{1}{2}$ poll. lata. *Flores* $1\frac{1}{4}$–$1\frac{1}{2}$ poll. longi ; staminibus inæqualibus longioribus exsertis.

I have ventured to assign this plant to Mr. Maximowicz's species, notwithstanding some little discrepancies. The leaves of our plant are not at all or but obscurely sinuate, and the corolla would seem relatively larger. It is nearly allied to *T. perfoliatum*, L., of the United States, in which however the corolla hardly exceeds the calyx-limb. I have no original note of the colour of the corolla. It is pale yellowish-brown in the dry state, and I think cannot have been purple by any chance.—D. Oliver.

Fig. 1. Calyx. 2. Anthers. 3. Style. 4. Longitudinal section of ovary. 5. Transverse section of same. *Enlarged.*

M.S.del

Triosteum sinuatum, Max.

Plate 1587.

LASIOCOCCA SYMPHILLIÆFOLIA, *Hook. f.*

Euphorbiaceæ. Tribe Acalypheæ.

Lasiococca, *Hook. f.* (*gen. nov.*). *Flores* monoici, apetali, axillares; masculi racemosi, fem. solitarii, pedicellati. Fl. masc. *Calyx* globosus, valvatim tripartitus. *Discus* 0. *Stamina* perplurima, centro floris inserta, antheris in phalanges ramosissimas dispositis, loculis globosis subdivaricatis, connectivo loculos cingente. *Pistillodium* 0. Fl. fem. *Sepala* 5–7, inæqualia, pubescentia glandulisque marginata, demum accrescentia et persistentia. *Ovarium* globosum, 3-loculare; styli 3, filiformes, erecti, basi breviter connati, intus stigmatosi; ovula in loculis solitaria. *Capsula* 3-cocca, coccis setis crassis spiculiferis opertis. *Semina* ?—Arbor *parva*. Folia *alterna* v. *subternatim verticillata*, *breviter petiolata*, *oblanceolata*, *acuminata*, *integerrima*, *basi angustata cordata*.

L. symphilliæfolia, *Hook. f.* (*sp. unica*). Homonoia symphilliæfolia, *Kurz in Herb. Hort. Bot. Calcutta.*

Hab. Foot of the Sikkim Himalaya, *Gamble.*

Rami teretes, cortice albo; ramuli pubescentes. *Folia* 3–6 poll. longa, 1–1½ poll. lata, supra basin angustata et subpanduræformia, glaberrima, nervis utrinque costæ 8–10 gracilibus; petiolus $\frac{1}{10}$–$\frac{1}{4}$ poll. longus, pubescens. *Racemi masc.* cernui, multiflori, rachi pubescenti, bracteæ rotundatæ; pedicelli breves; perianthium ¼ poll. diam. *Sepala* orbicularia, concava, membranacea, pubescentia. *Stamina* effusa, filamentis ramosissimis, antheris numerosissimis. *Fl. fem.* erecti; pedicellus brevis, bracteolatus, hispidus et glandulosus. *Sepala* ovata, interiora minora. *Ovarium* 3-lobum, pubescens. *Capsula* immatura ½ poll. diam., vertice depresso, sepalis accretis lineari-oblongis acuminatis stipata.

A very distinct genus, nearly related to *Homonoia*, from which it differs in habit, inflorescence, persistent accrescent sepals, and the curious armature of the capsule. I am indebted to Dr. King for a native specimen, and for others cultivated in the Calcutta Botanical Gardens.—J. D. Hooker.

Fig 1. Bract of male raceme. 2. Male flowers. 3. Cluster of stamens. 4 and 5. Anthers. 6. Fem. flowers. 7. Bract of fem. pedicels. 8 and 9. Sepals. 10. Ovary. 11. Transverse section of ditto. 12. Young fruit. 13. Processes of the surface of the cocci. All but figs. 1 and 12 *enlarged.*

M.S.del

Lasiococca symphyllæfolia Hk.f.

Plate 1588.

CAPPARIS HAINANENSIS, *Oliv.*

Capparidaceæ.

C. hainanensis, *Oliv.* (*sp. nov.*); glaberrima, ramulis teretibus stipulis spinosis brevissimis recurvis armatis, foliis oblongo-ellipticis obtusis sæpe breviter apiculatis mucronatisve, coriaceis subtus reticulatis petiolatis, floribus axillaribus **pedunculatis solitariis vel quasi racemosis**, sepalis 4 subæqualibus imbricatis oblongo-ellipticis apiculatis 2 exterioribus extus glabris 2 interioribus marginibus tomentellis, petalis obovato-oblongis calyce longioribus, ovario lanceolato-ovoideo crassiuscule rostrato.

Hab. Hainan, *Rev. B. C. Henry.*

Folia 2–3½ poll. longa, 1–1½ poll. lata; petiolus ⅙–⅓ poll. longus. *Flores* 1½–2 poll. diam. *Ovarium* 2–3 lin. longum; gynophorum 1–1½ poll. longum.

Mr. Henry describes the flowers as white with a purple centre. I have failed to identify this with any of the numerous species of this genus: perhaps *C. Heyneana*, Wall., may be its nearest ally.—D. Oliver.

Fig. 1. Anthers. 2. Ovary and gynophore. 3. Transverse section of ovary. *Enlarged.*

M.S del.

Capparis hainanensis, Oliv.

Plate 1589.

REHMANNIA GLUTINOSA, *Lib.* var. *angulata.*

Scrophulariaceæ. Tribe Digitaleæ.

R. glutinosa, *Libosch.*, *DC. Prodr.* ix. 275, var. *angulata*, 1–3-pedalis glanduloso-pilosa, foliis pinnatim lobatis lobis deltoideis dentatis, radicalibus longiuscule caulinis breviter petiolatis, floribus maximis racemosis, calyce profunde 5-fido segmentis lanceolatis longe acuminatis posticis longioribus, corollæ tubo dilatato labio antico porrecto, antherarum loculis divergentibus.

Hab. Ichang, *Dr. Henry* (**No. 1131**).

Folia caulina inferiora 2–4 poll. longa, lamina basi in petiolum cuneatim angustata. *Racemi* pauci- v. pluriflori, bracteis ovatis lanceolatisve dentatis; pedicelli $\frac{2}{3}$–1 poll. longi. *Calyx* $\frac{3}{4}$–1 poll. longus. *Corolla* $1\frac{3}{4}$–$2\frac{1}{4}$ poll. longa.

This plant is so different from the Peking plant distributed by Prof. Bunge, as also from the figures in the 'Botanical Magazine' (t. 3653) and 'Botanical Register' (t. 1960), that it is not without misgiving that I venture to regard it as a form of one very unstable, apparently widely cultivated, species. *R. Piasezkii*, Maximowicz, 'Diag. Pl. Nov. Asiat.' 1880, p. 684, would seem to be near this plant.—D Oliver.

Fig. 1. Base of corolla-tube and stamens. 2. Pistil. 3 and 4. Transverse sections of the ovary at different levels. *Enlarged.*

M.S. del.

Rehmannia glutinosa Lib. var: angulata

Plate 1590.

GOUPIA GLABRA, *Aubl.*

Celastraceæ ?

G. glabra, *Aubl. Pl. Guiane*, i. p. 296, t. 116. Arbor 30-pedalis, ramulis gracilibus glabris v. innovationibus parce setulosis, foliis stipulatis, alternis distichis petiolatis ovato- v. lanceolato-oblongis acuminatis basi rotundatis integris tenuiter coriaceis glabris v. parce pilosulis subtriplinerviis venulis ultimis subtransversis, floribus quasi-umbellatis, umbellis breviter pedunculatis, pedicellis gracilibus flore sæpius longioribus, calycis parvi segmentis ovatis, petalis elongatis lineari-lanceolatis puberulis æstivatione apice inflexis valvatis, antheris facie interiore disci cupuliformis insertis apice inflexo-setulosis, ovario libero, stylis 5 stellatim divaricatis brevibus subulatis, ovulis in loculis plurimis adscendentibus—Miers, Contrib. Bot. ii. 134, t. 74; Baill., Hist. Plant. vi. 10 and 514 (where additional references are given and the fruit and seed are described).

Hab. North Brazil, *Spruce*; Guiana, various collectors (the specimen figured collected in British Guiana by *Mr. Jenman*).

Folia $2\frac{1}{2}$-7 poll. longa; stipulæ caducæ, lineares $\frac{1}{4}$–$\frac{1}{2}$ poll. longæ. *Flores* $\frac{1}{4}$–$\frac{1}{3}$ poll. longi.

Mr. Miers proposed (l.c.) to found an Order upon this plant. M. Baillon, who kindly referred me to Aublet for it, treats it as the type of a distinct group of Celastraceæ, to which Order as '*genus valde anomalum*' Mr. Bentham also refers it (*Gen. Plant.* i. 369). Mr. Spruce has an interesting note on the plant drawn up from fresh specimens. The petals, he says, are yellow with red bases. The anther-apex is incurved and 'furnished with several straight, horizontal cilia which meet in apex of ovary.' Fruit: a small deep red-purple berry, subglobose depressed at apex. 'Seeds usually only one, rarely two, matured in each of the five cells. . . . Embryo in axis of fleshy albumen.' We may hope some ally, throwing light on the affinity of *Goupia*, may yet turn up in Guiana, where Mr. Jenman now keeps a watchful outlook.—D. Oliver.

Fig. 1. Diagram of flower. 2. Flower. 3. Petal. 4. Cupuliform disk after removal of petals. 5. Two anthers inserted on inner face of disk. 6. Pistil. 7. Transverse, and 8, longitudinal sections of ovary. *Enlarged.*

Goupia glabra, Aubl

Plate 1591.

CRYPTOLEPIS MONTEIROÆ, *Oliv.*

Asclepiadeæ. Tribe Periplocæ.

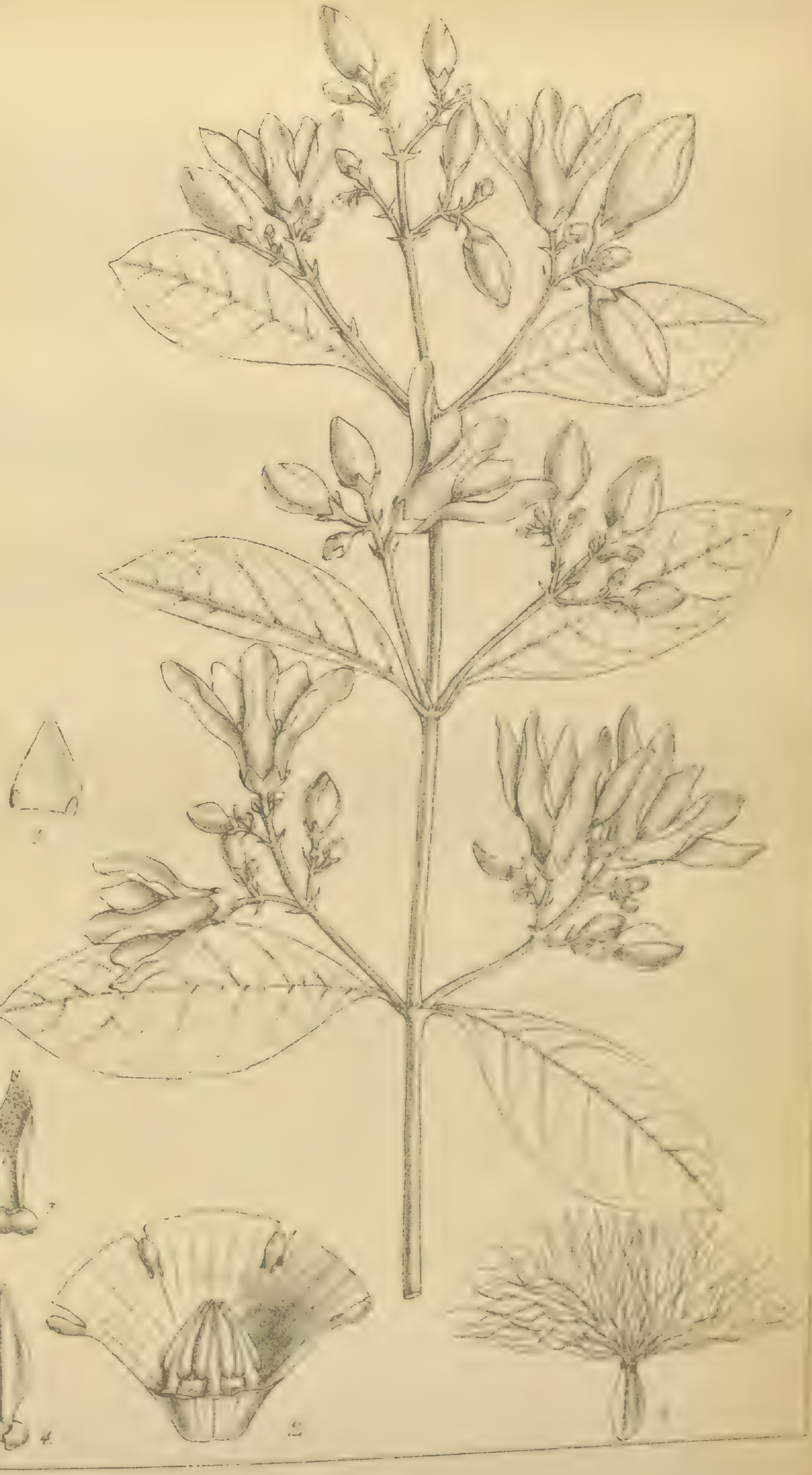
C. Monteiroæ, *Oliv.* (*sp. nov.*): scandens, glabra, foliis oblongo-oblanceolatis apiculatis basi cuneatis subtus pallidioribus reticulatis petiolatis, cymis plurifloris axillaribus v. quasiterminalibus pedunculatis ramulis divaricatis, bracteis parvis ovatis, pedicello calycem subæquante, corollæ profunde 5-fidæ segmentis oblongo-lanceolatis tubo subduplo longioribus, coronæ squamis clavatis carnosulis sinubus corollæ insertis.

Hab. Delagoa Bay, *Mrs. Monteiro.*

Folia $1\frac{1}{2}$–2 poll. longa; petiolus $\frac{1}{6}$–$\frac{1}{4}$ poll. longus. *Flores* $\frac{2}{3}$ poll. longi.

We have a Delagoa specimen of probably the same species communicated by Mrs. Monteiro, in fruit. The follicles are subterete longitudinally striate and about 4 inches long. A very near ally, and probably congeneric, is *Curroria decidua*, Planchon in 'Flora Nigritiana,' p. 457. Its habit, however, so far as one can judge from the specimens, is that of an erect shrub rather than a climber. Mrs. Monteiro describes the flowers as cream-coloured with brown centre.—D. Oliver.

Fig. 1. Calyx-segment and glands. 2. Base of corolla-tube and stamens. 3 & 4. Corpuscula, back and face. 5. Seed. Except fig. 5 *enlarged.*



M S del

Cryptolepis Montrouz Dec.

Plate 1592.

MEGISTOSTIGMA MALACCENSE, *Hook. f.*

Euphorbiaceæ. Tribe Plukenetieæ.

Megistostigma, *Hook. f.* (*gen. nov.*). *Flores* minuti, monoici, in racemos unisexuales axillares dispositi, apetali. Fl. masc. *Calyx* ovoideus, 3-lobus, tubo obconico, disco tubo adnato; lobi ovati, obtusi, valvati. *Stamina* 3, centro floris inserta, erecta, filamentis brevibus crassis; antheræ magnæ, crassæ, triangulari-ovatæ, basi intrusæ, loculis angustis introrsum dehiscentibus. *Pistillodium* 0. Fl. fem. *Sepala* 5, lineari-lanceolata, fructu accrescentia. *Discus* 0. *Ovarium* 3-lobum, hirsutum, 3-loculare; stylus brevissimus, stigmate crasso globoso valvatim trilobo; ovula in loculis solitaria. *Capsula* depresso-tridyma, appresse pubescens, 3-cocca, 3-valvis, lignosa. *Semina* globosa.—Frutex, *fere glaber*, *volubilis*. Folia *alterna*, *petiolata*, *elliptica*, *cuspidata*, *integerrima*, *triplinervia*.

M. malaccense, *Hook. fil.* (*sp. unica*); Singapore, *Lobb*.

Hab. **Malacca**, *Maingay*.

Caulis crassitie pennæ corvinæ, teres, parce pubescens. *Folia* 4–6 poll. longa, 2–2½ lata, tenuiter coriacea, basi subacuta v. rotundata, nervis utrinque costæ 2–3, nervulis tenuibus; petiolus ½–1-pollicaris, gracilis. *Racemi* 1–1½ poll. longi, masculi gracillimi; bracteæ minutæ. *Fl. masc.* $\frac{1}{3\,6}$ poll. longi, sparse hirsuti; calycis lobi intus glabri. *Fl. fem.* sepala hirsuta; stigma ovario crassius, læve, lobis obtusis, intus stigmatosis. *Capsula* ½–¾ poll. diam.; epicarpio solubili, coccis crustaceis 2-valvibus. *Seminum* testa variegata.

A singular genus, closely allied to *Cnesmone*, Blume, as also to Baillon's Madagascar genus *Sphærostylis*, which has similarly a very large stigma, but very different stamens.—J. D. Hooker.

Fig. 1. Male flower. 2. The same laid open. 3. Stamen. 4. Female flowers. 5. Transverse section of ovary. 6 & 7. Cocci. All *enlarged*.

M S del

Magnoliagina malaccensis Hk f

Plate 1593.

ACTINIDIA CHINENSIS, *Planchon*.

Ternströmiaceæ. Tribe Sauraujeæ.

A. chinensis, *Planchon in Hook. Lond. Journ. Bot.* vi. (1847), p. 303 (*ad not.*); foliis longe petiolatis suborbicularibus transverse latioribus apice retusis basi leviter cordatis, margine setuloso-denticulatis, supra nervo medio excepto glabris subtus dense cano-tomentosis venis subtus prominulis, floribus axillaribus solitariis petiolo brevioribus, alabastro dense tomentosis, ovario hirsuto, stigmatibus 15–30 glabris recurvis, fructibus pulposis ellipsoideis v. subglobosis, epicarpio papyraceo.

Hab. Ichang, China, *Dr. Henry*. Chekiang, (Herb. *Forbes*, Ind. Fl. Sin. p. 78). China, unlocalised, *Fortune*.

Frutex, ramis flexuosis teretibus deinde glabris. *Folia* $2\frac{1}{2}$–$3\frac{1}{2}$ poll. lata; petiolus $\frac{3}{4}$-$1\frac{1}{4}$ poll. longus. *Alabastra* globosa dense cano-tomentosa. *Fructus* 1–$1\frac{1}{4}$ poll. longus.—D. Oliver.

Fig. 1. Stellate hairs of indumentum. 2. Petal. 3. Flower, calyx and corolla removed. 4. Anthers. 5. Transverse section of ovary. 6. Fruit. 7. Seed. 8. Longitudinal section of same. Except fruit, *enlarged*.

M.S.del.

Actinidia chinensis.

Plate 1594.

OPHIOCARYON PARADOXUM, *Schomblk.*

Sabiaceæ.

O. paradoxum, *R. H. Schomburgk, in Ann. Nat. Hist.* v. (1840) p. 203; foliis alternis petiolatis impari-pinnatis 5–7(–13)-foliolatis, foliolis petiolulatis coriaceis ellipticis v. oblongo-ellipticis breviter obtuse acuminatis basi plus minus rotundatis integris glabris, floribus minutis carneis numerosis in paniculis sæpe amplis subterminalibus dispositis, pedunculis divaricatis ferrugineo-pubescentibus, bracteis bracteolisque minutissimis, petalis leviter inæqualibus ellipticis v. interioribus oblongo-ellipticis, staminibus antheriferis 2 filamentis turbinato-incrassatis antheris subdidymis connectivo obtusiuscule apiculato, ovario glabro bidentato.

Hab. River Essequibo, *Schomburgk*; Mazaruni River (No. 658) and Macouria River (No. 2410), *Mr. Jenman.*

Arbor (excelsa, *Schombk.*) 15–40-pedalis (*Jenman*). *Folia* ampla, foliolis lateralibus 2–(–6)-jugis $3\frac{1}{2}$–$6\frac{1}{2}$ poll. longis, f. terminali 6–9 poll. longo $2\frac{1}{2}$–$4\frac{1}{2}$ poll. lato. *Flores* 1 lin. longi. *Nux* $1\frac{1}{2}$ poll. diam. endocarpio tenui osseo.

We are indebted to Mr. Jenman for flowering and fruiting specimens of this singular tree previously only known to us from Schomburgk's description. It is evidently very closely allied to, and I think may prove congeneric with, Mr. Bentham's genus *Phoxanthus*, in which the petals are narrowed into tail-like apices.—D. Oliver.

Fig. 1. Flower and pedicel. 2. Expanded flower. 3. Petal with staminode slightly adhering at base. 4. Antheriferous stamen, back and front. 5. Ovary. 6. Transverse section of same. 7. Fruit. 8. Same laid open. (9. Embryo, from an original drawing of Schomburgk's.) Floral analyses all *enlarged*.

Ophiocaryon paradoxum, Schombk.

of biological interest that we want more light upon. Exception may be taken to my reference of the plant to *Pedalineæ*. The alternative would here seem to be to regard it as the type of a distinct Natural Order. So far as our material goes, I think it better to look upon it as an aberrant member, taken to aquatic habits, of *Pedalineæ*, all the other species of which are terrestrial, and indeed often characteristic of specially arid localities.—D. Oliver.

Fig. 1. Adherent ovary at time of flowering. 2. Anther, back and front. 3. Stigma. 4. Fruit. 5. Same laid open. 6. Base of seed. 7. Embryo. Excepting fig. 4, *enlarged*. (The corolla marked * is too definitely drawn as with a truncate mouth: the intention was to give a dotted line, leaving the form of the lobes and aperture uncertain. The corolla Dr. Henry describes as 'white above, yellow below.')

Plate 1595.

TRAPELLA SINENSIS, *Oliv.*

Pedalineæ.

Trapella, *Oliv.* (*gen. nov.*). *Calyx* tubo ovario adnato apice tempore florifero 3-cornuto appendicibus adscendenti-divergentibus limbo libero 5-fido calycis brevioribus. *Corolla* epigyna tubulosa superne dilatata lobis . . . *Stamina* epipetala inclusa antherifera 2, antheris biloculariibus loculis subparallelis v. leviter divergentibus connectivo rotundato carnosulo insidentibus, staminodiis anantheris elongatis 2. *Ovarium* inferum uniloculare apice tantum liberum; ovula 2 (?) prope apicem cavitatis lateraliter inserta; stylus elongatus; stigma terminale basi appendicibus 2 brevibus patentibus instructum. *Fructus* angustus elongatus monospermus indehiscens, apice appendicibus 5 coronatus, 3 elongatis rigidis gracilibus arrectis apice incurvis 2 brevioribus spinosis anguste subulatis patentibus. *Semen* pendulum elongatum tetragonum exalbuminosum; embryonis recti radicula supera, cotyledonibus lineari-oblongis. Herba *natans*, *foliis oppositis petiolatis*, *inferioribus lineari-oblongis basi angustatis dentatis*, *superioribus deltoideo-rotundatis v. cordiformibus obtusis crenato-dentatis glabratis v. nervis subtus puberulis*. Flores *axillares solitarii pedunculati*.

T. sinensis, *Oliv.* (*sp. unica*).

Hab. Ichang, *Dr. Henry* (No. 1671).

Caulis gracilis inferne radices fibrosas ad nodos emittens. *Folia* inferiora $\frac{3}{4}$–1 poll. lata; petiolus $\frac{1}{2}$–1 poll. longus. *Flores* pedunculati, pedunculus $\frac{1}{3}$–1 poll. longus; corolla epigyna $\frac{1}{2}$–$\frac{2}{3}$ poll. longa. *Fructus* $\frac{1}{2}$–$\frac{3}{4}$ poll. longus, 1–1$\frac{1}{2}$ lin. latus; spinis apicalibus longioribus 1$\frac{1}{2}$–2 poll. longis, 2 brevioribus 2–3 lin. longis.

This plant I take to be one of the most interesting acquisitions China has afforded to the botanist in recent times. How often do we find the old proverb confirmed in connection with the discovery of new plant-forms: 'It never rains but it pours'! My friend M. Maximowicz wrote me in March last: 'I was about to tell you that I never saw anything like it (our present plant), when I got a letter from a Japanese botanist, enclosing fragments of a plant which is evidently a species of your genus, but so incomplete that I cannot describe it.'

Although Dr. Henry's specimens are excellent so far as they go, yet there remains a good deal to clear up. I cannot, for instance, be sure of the form of the corolla-lobes, nor can the æstivation be made out. The form of the ovules remains uncertain, the stigma is very curious and of, as yet, uncertain structure, and there are one or two other features

Plate 1596.

BENNETTIA LONGIPES, *Oliv.*

Bixineæ.

B. longipes, *Oliv.* (*sp. nov.*); foliis longiuscule petiolatis oblanceolatis v. oblongo-ellipticis breviter acuminatis basi obtuse cuneatis remotiuscule serratis glabris, paniculis divaricatis multifloris puberulis terminalibus v. in axillis foliorum delapsorum, pedicellis flore sæpius longioribus, sepalis 4 v. 3 ovatis obtusis ciliolatis, glandulis disci (fl. ♂) carnosulis obtusis truncatisve.

Hab. Silhet, *Dr. Wallich* (*Cat.* 7757).

Folia 5–9 poll. longa, 2–3 poll. lata; petiolus $\frac{3}{4}$–$1\frac{1}{2}$ poll. longus. *Paniculæ* (fl. ♂) ramosæ, ramulis divaricatis; bracteæ parvæ lanceolatæ v. subulatæ; pedicelli graciles $\frac{1}{4}$–$\frac{1}{2}$ poll. longi, (fl. ♀) sæpius 2–5 fasciculati rigidiusculi umbellatim divergentes 3–5 lin. longi. *Flores* $\frac{1}{4}$ poll. diam.

Nearly allied to the Javan *B. Horsfieldii*, Miq. The leaves are larger, more obscurely serrate, on longer petioles, and the flowers (♀) on longer pedicels.—D. Oliver.

Fig. 1. Pedicellate bud (♂). 2. Expanded flower. 3. Stamens and gland-lobes of disk. 4. (♀) Pistil. 5. Transverse section of ovary. *Enlarged.*

Plate 1597.

EMBELIA RIBES, *Burm.* var. *penangiana.*

Myrsinaceæ.

E. Ribes, *Burm.* (*DC. Prodr.* viii. p. 85). var. *penangiana*; foliis oblongo-oblanceolatis breviter acuminatis basi cuneatim angustatis tenuiter coriaceis glabris, paniculis purpurascenti-puberulis.

Hab. Penang, *C. Curtis* (No. 306).

Folia 4–4½ poll. longa, 1¼–1½ poll. lata; petiolus ½ poll. longus. *Panicula* terminalis ampla 6–10 poll. longa. *Baccæ* obovoideo-globosæ corrugato-tuberculatæ 1½ lin. longæ; pedicelli fructiferi bacca duplo breviores.

At first sight this plant looks very different from the common *E. Ribes, Burm.*, in the attenuation of the leaf lamina into the petiole, but it scarcely merits specific separation as I at first thought it might.—D. Oliver.

Fig. 1. Æstivation of corolla-lobes. 2. Bud. 3. Expanded flower. 4. Part of corolla laid open. 5. Pistil. 6. Longitudinal, and 7. transverse, section of ovary. 8. Fruit. 9. Section of same. 10. Embryo. *Enlarged.*

M S del

Embelia Ribes. Burm. var. periangiana

Plate 1598.

MELIOSMA SQUAMULATA, *Hance*.

Sabiaceæ.

M. squamulata, *Hance in Journ. Bot.* 1876, p. 364; foliis simplicibus longe petiolatis ovalibus ellipticisve obtuse caudato-acuminatis basi in petiolum cuneatim angustatis integerrimis, supra glabris, subtus opacis pallidioribus minutissime lepidoto-canis, venis primariis utrinque 3–5 arcuatim anastomosantibus, paniculis terminalibus solitariis v. 3–4-nis ferrugineo-pubescentibus, bracteis parvis ovatis hirsutis, sepalis ovato-rotundatis ciliolatis, petalis glabratis, filamentis antheriferis dorso squama bifida lobis divaricatis acutis adnatis, ovario glabro.

Hab. Hongkong, Wongneichung, *Lamont* ex *Hance*, Victoria Peak, *C. Ford* (No. 106).

Folia $2\frac{1}{2}$–3 poll. longa; petiolus $\frac{3}{4}$-$1\frac{1}{2}$ poll. longus.—D. Oliver.

Fig. 1. Bud. 2. Antheriferous stamen, front and back. 3. Staminode, inserted on base of petal. 4. Ovary and disk. 5. Transverse section of same. *Enlarged.*

M.S del

Meliosma squamulata, Hance.

Plate 1599.

HUTCHINSIA PERPUSILLA, *Hemsl.*

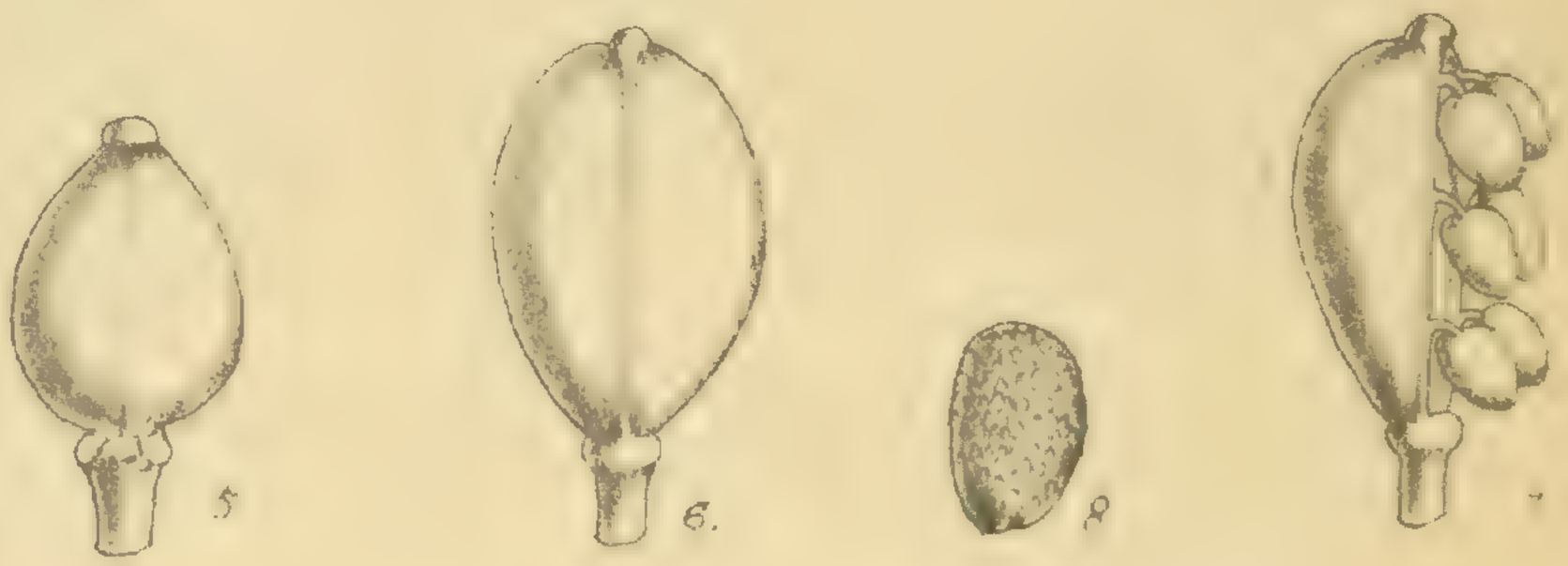
Cruciferæ. Tribe Thlaspideæ.

H. perpusilla, *Hemsl.* (*sp. nov.*); herba annua, glaberrima, gracillima, sæpissime triplo minor quam in icone, foliis radicalibus rosulatis oblongis vel rotundatis integris dentatis vel sublobatis, floribus paucis minutissimis, petalis spathulatis filamentis filiformibus, capsulis ovoideis vel obovoideis, cellulis 6-spermis, seminibus biseriatis pendulis.

Hab. Gilgit: Killa Panja, at 9000 feet, *Dr. Giles.*

In the 'Genera Plantarum' *Hutchinsia* is limited to *H. petræa*, which is usually branched from the base, has pinnately divided leaves and two seeds in each cell of the capsule. Perhaps it would be better to refer *Iberidella Andersonii*, Hook. f., and T. Thoms. here, and the whole of Boissier's species of *Iberidella* to *Æthionema*, as he has done.—W. B. Hemsley.

Fig. 1. Upper part of inflorescence. 2. Sepal. 3. Petal. 4. Stamens. 5 and 6. Capsules. 7. Capsule with one of the valves removed. 8. An immature seed. *Enlarged.*



M S. del

Hutchinsia perpusilla, Hemsl.

Plate 1600.

CHIMONANTHUS NITENS, *Oliv.*

Calycanthaceæ.

C. nitens, *Oliv.* (*sp. nov.*); foliis lanceolatis v. elliptico-lanceolatis acuminatis basi cuneatim breviter angustatis tenuiter coriaceis glaberrimis supra nitentibus (in sicco conspicue reticulatis) graciliter petiolatis, floribus axillaribus solitariis brevissime pedunculatis bracteolis ovatis minute puberulis gradatim majoribus pedunculum obtegentibus, perianthii foliolis exterioribus rotundatis, intermediis duplo longioribus lineari-lanceolatis acuminatis, interioribus brevioribus unguiculatis ovato-lanceolatis acuminatis staminibus antheriferis 5.

Hab. China, Ichang, *Dr. Henry* (No. 2915).

Folia ut videtur persistentia $2\frac{1}{2}$–$3\frac{1}{2}$ poll. longa, 1–$1\frac{1}{3}$ poll. lata; petiolus canaliculatus glaber $\frac{1}{4}$–$\frac{1}{3}$ poll. longus. *Flores* 'albi,' eis *C. fragrantis* similes sed perianthii foliolis interioribus acuminatis. *Fructus* etiam *C. fragrantis*.

Another of Dr. Henry's important additions to our botanical knowledge of the interior of China. A second distinct species of a genus, so long regarded as monotypic, belonging to one of the smallest groups held of Ordinal rank, and doubtless of very remote origin, is of great interest. We need not despair of a *Calycanthus* from the same region.—D. Oliver.

Figs. 1, 2, 3, & 4. Successive perianthial leaves from without inwards. 5. Flower after removal of perianth. 6. Same, vertical section. 7. Carpel. 8. Dry fruit-receptacle. *Analyses enlarged.*

M S. del.

Chimonanthus nitens, Oliv.

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